

### North Dakota Department of Transportation

## **BIENNIAL REPORT**

2001 - 2003

### Submitted by

### NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

Bismarck, North Dakota http://www.state.nd.us/dot/

### **DIRECTOR**

David A. Sprynczynatyk, P.E.

December 1, 2003



December 1, 2003

The Honorable John Hoeven Governor of North Dakota 600 East Boulevard Avenue Bismarck, ND 58505-0001

Dear Governor Hoeven:

In compliance with Sections 24-02-01 and 54-06-04 of the North Dakota Century Code, I present to you the Biennial Report of the North Dakota Department of Transportation for fiscal years 2001 to 2003.

This biennium has brought the department many challenges, which our hard-working, dedicated employees have turned into accomplishments. The department is a leader in state government in providing e-commerce customer services. Intelligent Transportation System initiatives have helped to make our state highway system even safer by providing motorists with up-to-date information on weather and road conditions. Our employees have kept the roadways clear in the worst of weather, completed countless maintenance projects each year, and they have successfully completed a number of large construction projects. I am very proud of the department and especially its employees and all that they accomplish.

Sincerely,

David A. Sprynczynatyk, P.E.

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Director

59/pb Enclosure

### **North Dakota Department of Transportation**

### Biennial Report: July 1, 2001 through June 30, 2003

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# Statutory and Constitutional Responsibilities

#### Creation

The first North Dakota State Highway Commission was created in 1913. The North Dakota Department of Transportation was created by 1989 North Dakota Session Laws Ch. 22, codified as North Dakota Century Code, Title 24.

#### **Function**

NDCC § 24-01-01 and 24-03-02 make NDDOT responsible for the construction, maintenance, protection, and control of the highways comprising the state highway system. NDCC § 39-01-01.1 describes the general responsibilities of the Drivers License and Traffic Safety Division and the Motor Vehicle Division. When authorized under NDCC § 24-04-01, the Department of Transportation director may enter

into contracts and do all things necessary to cooperate with the federal government in the construction of roads under the provisions of a congressional act.

### **Funding**

The state highway fund must be spent in the following order of priority: (1) maintenance of the state highway system, and (2) the cost of construction and reconstruction in an amount necessary to ensure federal aid available to the state. Monies not spent under (1) or (2) may be spent on state highways for construction, improvement, or maintenance. (NDCC § 24-02-37).

### National Highway Safety Act of 1966

Under NDCC § 54-07-05, the Governor has the responsibility

of dealing with the federal government with respect to the state's participation in the national Highway Safety Act of 1966. The Governor has designated the director of the Department of Transportation to act on his behalf in administering that act.

#### **Rail Service Assistance**

The department, with the approval of the Public Service Commission, has the authority to qualify the state for rail service assistance under the Railroad Revitalization and Regulatory Reform Act of 1977 (NDCC § 49-17.1-02).

#### **State Aeronautics Board**

The NDDOT director serves as a liaison to the State Aeronautics Board, helping the board plan and coordinate airport and ground transportation.

### **Key 2003 Legislation**

HB 1012—This was the department's appropriation bill which provides funding of \$784,385,918 to operate the department during the 2003–05 biennium. It also allows the department to acquire land to eliminate "no-mow" and "managed–mow" areas adjacent to the state's roadways and deferred for two years (until January 1, 2006) allowing haying of no-mow areas. Much of the discussion on HB 1012 concerned state matching funds for additional federal funds that had been received

for the current year and anticipated for the rest of the biennium. To raise additional funds, motor vehicle registration fees were raised by \$3, \$1 of which goes to the highway fund and \$2 to the state highway tax distribution fund. Along with this, the sunset clause on the law (enacted by the 2001 legislature) for \$2 to go to the state highway fund was removed.

**HB 1112**—Increases the fees for vehicles operating overweight on

the highway system. This bill was worked on in conjunction with the highway patrol and was amended several times to reduce the increases before it was finally passed.

**HB 1113**—Allows the department to accept bids by electronic media. There is a delayed effective date of January 1, 2004.

**HB** 1161—Lowers the bloodalcohol content (BAC) threshold for driving under the influence for both the administrative and criminal processes, from 0.10 to 0.08. This change is a federal mandate, with funding sanctions for failure to comply. An attempted referral did not gain the required signatures to put the referral measure on the ballot.

**HB 1046**—Removes the 55 mph speed limit on paved two-lane roads at night. This bill had an emergency clause and was effective on March 24. But, changes were made in both the DOT appropriations bill and the OMB appropriation bill to lessen the effect on counties by specifying that the old 55 mph speed limit would stay if there is no speed limit posted (an emergency clause to these changes was also adopted in the OMB bill). This bill originally came out of an interim study.

HB 1047—Started out, during an interim study to greatly simplify the fee structure for speeding violations and at the same time raising the fees for speeding violations. As finally passed, much of the simplification was undone, but the fees were slightly increased in certain situations and an extra point was added for going 11–15 mph over the limit where

the speed zones are in excess of 65 mph. This bill also raised the speed limit on paved and divided multi-laned highways (such as Highway 83 and Highway 2) to 70 mph and on the Interstate to 75 mph.

**HB 1207**—Provides for the creation of local port authorities, both at the municipal and regional levels.

HB 1261—Exempts commercial movement of forage harvesters from the highway width, length, or height requirements. The bill also changed the exemption for motor vehicles owned and operated by nonresidents engaged in harvesting from July 15 to June 1.

HB 1322—Doubles the fee for a speeding violation in a highway construction zone from \$40 to \$80. It also clarified that construction workers need to be present in the area at the time of the violation for the enhanced penalty to kick in.

**HB 1372**—Modifies the law on when a train may block a roadway at a crossing by adding loading or unloading operations. The bill also provided for other times of obstruction when there

is a written agreement between a governmental entity that controls a roadway and the interested commercial entities. That agreement must also indicate who is responsible for notification of local emergency service providers. The penalty was also increased to a Class B misdemeanor.

**HB 1426**—Provides for the creation of commerce authorities with taxing powers and an exemption from income, sales, and use taxes.

SB 2104—Increases the amount of vehicle traffic deemed to have a significant impact on the transportation system, and thus requiring notification of the department when counties are issuing building permits. The new amount of traffic is an average daily usage of at least 25 vehicles whose gross weight exceeds 60,000 pounds; the old threshold was 10.

SB 2301—Adds an "exempt" sign as an alternative to "tracks out-of-service" when a railroad is designating an out-of-service crossing. This is allowed under the Manual on Uniform Traffic Control Devices.

### **Major Accomplishments**

### Ground Breaking of Four Bears Bridge project

A ground breaking ceremony was held on May 12, 2003, marking the start of the Four Bears Bridge project near New Town. Gov. John Hoeven, Mandan, Hidatsa, and Arikara Nation (MHAN) Chairman Tex Hall, and North Dakota Department of Transportation (NDDOT) Director David Sprynczynatyk headed the list of dignitaries marking the official beginning to the \$55 million project, the largest ever built by the NDDOT. The new bridge will have two 12-foot-wide driving lanes with 8-foot-wide shoulders, along with a 10-foot-wide walkway featuring an informational display. Thirteen piers will hold more than 500 8'×50'×16' concrete sections, which will be precast at the construction site, then moved by barge to their position on the bridge. The new bridge is scheduled to be completed by June of 2005.

### I–29 through Fargo: years two and three

The reconstruction of I-29 through



Building the 13th Avenue South overpass on I-29 in Fargo



State and Tribal representatives break ground on the new Four Bears Bridge

the City of Fargo is proceeding according to schedule. In 2001, the northbound interstate roadway was reconstructed from Rose Coulee to Main Avenue in Fargo, including interchange and separation bridges at 9th Avenue South, 13th Avenue South, the Texas Turn, and 17th Avenue South. The approximate project cost was \$17.1 million. In 2002, the southbound interstate roadway, interchange, and separation bridges, were reconstructed. In addition, portions of 13th Avenue

South, 36th Street South, and 38th Street South adjacent to the I-29 and 13th Avenue Interchange, were reconstructed to accommodate the interchange layout and the new grade separations at 9th Avenue South and 17th Avenue South. The southbound interstate roadway, structures, and city streets, cost approximately \$23.6 million. The reconstruction of I–29 provides for added capacity for traffic moving in and around the city. The new grade separations improve access to Fargo's street network, and remove circuitous traffic movements, thereby reducing congestion and delays on 13th Avenue South while reducing traffic on the interstate.

Future construction includes the Main Avenue interchange in 2004, crossovers for the I–29 north and southbound projects north of Main Avenue in 2005, reconstruction of northbound I–29 from Main Avenue to County road 20 in 2006, and the reconstruction of southbound I–29 from Main Avenue to County road 20 in 2007.

#### E-commerce

NDDOT is a leader among state agencies in providing customer services through the Internet and other electronic service venues. During the past biennium, the department launched an on-line motor vehicle registration renewal system. Customers with a debit or credit card can now go on-line to renew their vehicle registrations. Vanity plate customers can use their computers to see if the personal license plate they desire is available. Other e-commerce services offered by NDDOT include: map sales, ordering plans and proposals, vehicle auction information, and weather, road condition, road construction and load restriction reports. Customers can also go on-line to change their address, get a driver's manual, find crash statistics, request forms and fees, purchase their driving record, and find out driver license testing schedules, purchase truck permits, and get a copy of the *Truckers Handbook*.

### Strategic Plan

In 2002, the department created an update to the original Strategic Plan developed in 1997. Nearly 100 NDDOT employees from across the state, and from a broad range of classifications, worked on the plan. The Strategic Plan touches each of the department's core functions: planning and project development, operations, services to government, security and safety, and the department's overall organizational health. The plan included six goals and 29 objectives, which were paired down to five goals and 28 objectives when the plan was updated in 2003. The department's vision, mission, and values described in the plan are the ultimate destinations the department wishes to



reach. The goals and objectives are the "map" showing the route to those destinations. The plan will help NDDOT to concentrate on efforts leading to the department's ultimate goal, to continue to provide a transportation system that safely moves people and goods.

### **Statewide Transportation Improvement Plan (STIP)**

This past biennium, the format for the Statewide Transportation Improvement Plan (STIP) was improved by making the process for creating the STIP more user friendly. The public input process has been expanded to include meetings with tribes, cities, and counties. The department presents these political subdivisions with the development process, and informs them of the upcoming projects in their jurisdictions. The STIP has also changed to a twoyear document. It is still updated every year, but the new process eliminates possible lapses of approved projects. The document is also available on the department's web page for public view.

#### **ITS Initiatives**

Intelligent Transportation Systems, or ITS, are wireless and wire-

line communication-based tools that help the department monitor and manage traffic flow, reduce congestion, enhance productivity, and save lives, time, and money. The department accomplishes this through advanced traveler information systems (Internet and telephone), advanced traffic management systems (traffic cameras, signal sensors), and incident management systems (integrated internal communications networks for department maintenance employees). Some of the ITS systems deployed over the past two years have been signal video detection systems, video surveillance cameras, fiber optic networks, automated bridge-deck sprayers, variable message boards, and the North Dakota 511 Travel Information System.

### North Dakota 511 Travel Information

511 is a national service for travelers to get the information they need to safely travel across the nation. Motorists can access weather and road information, road construction reports, and seasonal load restriction information through this one telephone

number. North Dakota 511 Travel Information went on-line on February 10, 2003. Gov. John Hoeven placed the first official call during a ceremony in Grand Forks. In 1995, with the cooperation of the North Dakota Congressional Delegation, the University of North Dakota secured funding through the Federal Highway Administration to work with the North Dakota Department of Transportation to construct, test, and develop a proof of concept of an Advanced Traveler Information System. By 1996, UND was providing 24 hour operations in support of #SAFE, a single region-wide number for access by wireless phones across North and South Dakota. In May of 1998, a new company began providing services in North Dakota; Meridian Environmental Technology, Inc. After UND proved the concept for a single statewide number for traveler information could work, and using #SAFE as the basis for a national model, the USDOT filed a formal request with the FCC to assign a nationalwide "511" traveler information number, replacing over 300 separate numbers across the United States. On November 22, 2002, South Dakota converted to 511, with Montana following suit in

January 2003, followed by Kansas and North Dakota. Several other states are currently planning to introduce 511 services over the next biennium.

### **Context Sensitive Design**

In recent years, highway design has seen dramatic changes. Today, roadway designers are concerned with more than technical, maintenance, and cost issues. Designers recognize that aesthetics and environmental preservation deserve equal consideration, and they strive to build highways that fit naturally into their landscapes. This concept is known as Context Sensitive Design. The Federal Highway Administration defines Context Sensitive Design as "a collaborative, interdisciplinary approach that involves all stakeholders to develop a transportation facility that fits its physical setting and preserves scenic, aesthetic, and environmental resources." Context Sensitive Design has to do with the idea that highways and bridges should harmonize with their landscapes instead of disrupting them. For instance, following Context Sensitive Design principles, a highway next to a winding river would ideally curve and blend with the waterway, rather than be

built straight, against the natural landscape. Context Sensitive Design specifically addresses safety, environmental, scenic, historic, and preservation concerns. The Four Bears Bridge project in New Town is an example of this new approach. The bridge was designed to blend in with the natural surroundings of the area. In addition, the bridge's aesthetic features were chosen by a design charrette, which is a committee made up of local residents and expert outsiders who work together to solve local design problems, and to come up with design features that represent local customs and history.

## Record years of road construction in 2002 and 2003

The department's commitment to providing a safe and comfortable ride on the state highway system took major steps in the 2002 and 2003 construction seasons. Major urban projects in Fargo, Bismarck, and near Minot contributed to a record \$256.6 million spent on road construction projects in 2002. Could the department top that? It did in 2003. \$264.4 million was spent on road construction, led by the department's biggest project ever attempted - the \$55 million Four Bears Bridge project, scheduled to open in 2005. Other major projects in 2003 included the reconstruction of South Broadway in Minot, the reconstruction of U.S. 2 through Devils Lake, and U.S. 2 reconstruction from Rugby to Knox. NDDOT will continue to allocate federal and state funds it receives to improve the safety and ride on state highways in the most cost-effective ways possible, while prioritizing future projects to benefit all motorists in the state.



### **Major Challenges**

### **Aging Highway System**

As in years past, the North Dakota Department of Transportation continues to face the challenge of maintaining a constantly aging highway system. North Dakota, along with the rest of the nation, underwent a highway building boom in the 1950s, '60s, and '70s. In the same way as the large, post-war "baby boom" generation is aging as a group, the highways built during those decades are now 30, 40, and 50 years old. NDDOT generally builds asphalt roadways with a 20-year lifespan, and concrete roadways with a 30-year lifespan. Unfortunately, funding hasn't been available to reconstruct or rehabilitate some of the state's oldest highways, which continue to deteriorate. The state is going to face some difficult decisions in the future. Pavement preservation practices are being explored to help extend the life of highways. It will also be necessary to spend additional resources in the growth areas to enhance capacity and functionality. At the same time, the existing state highway system will need normal maintenance, and in some cases, extensive improvements.

North Dakota also has over 44-hundred bridge structures that must be inspected and maintained. Keeping up with these structures will be a major challenge. Two structures have been identified as priority projects:

 Memorial Bridge in Bismarck/ Mandan. The existing bridge is showing the signs of being 80 years old. A decision has been made to replace Memorial Bridge. Alternate bridge types will be designed and bid competitively. It will be a challenge to design and build the bridge so that traffic can be maintained throughout the construction. A

- commitment has been made to make the bridge aesthetically pleasing. Another challenge is to get a beautiful structure while meeting the budget and attaining the necessary functionality. The bid opening is scheduled for November of 2005.
- Drayton Bridge on Highway 66 over the Red River in Northeastern North Dakota. The existing bridge is not usable during flooding because the approach roads are under water. The challenge is to design approach roads and a bridge that meet both flood stage considerations (roadway and bridges remain open during the flooding of the Red River, while at the same time water levels are not increased upstream). Another challenge is dealing with the unstable soils that are typical of the Red River Valley.

### **Major Goals**

### Goal 1: Enhance customer satisfaction.

NDDOT's customers are the reason the department works so hard to constantly improve its products and services. The department is reviewing how it provides information to the public regarding those products and services, and how the department can learn from the feedback provided by customers. Through this review, the department will make adjustments in its procedures so it can continue to offer the highest level of customer satisfaction possible.

### Goal 2: Increase safety on North Dakota's transportation system and within the Department of Transportation.

Safety is paramount to the NDDOT. The department's mission is to provide a transportation system that safely moves people and goods. This is also true in regards to department employees.

By increasing safety on the state highway system, the department strives to decrease the number of crashes, injuries, and fatalities. Additionally, in the area of worker safety, the NDDOT aims to eliminate or decrease the number of worker injuries, work zone injuries, and fleet vehicle accidents.

### Goal 3: Improve the quality and efficiency of North Dakota's transportation system and services.

The NDDOT always strives for the highest levels of quality and efficiency possible. The department aims to attain this through decreasing the number of deficient bridges, increasing ride quality on the state highway system, improving pavement condition, and improving load–carrying capacity within the confines of the resources available to the department.

### Goal 4: Enhance employee satisfaction.

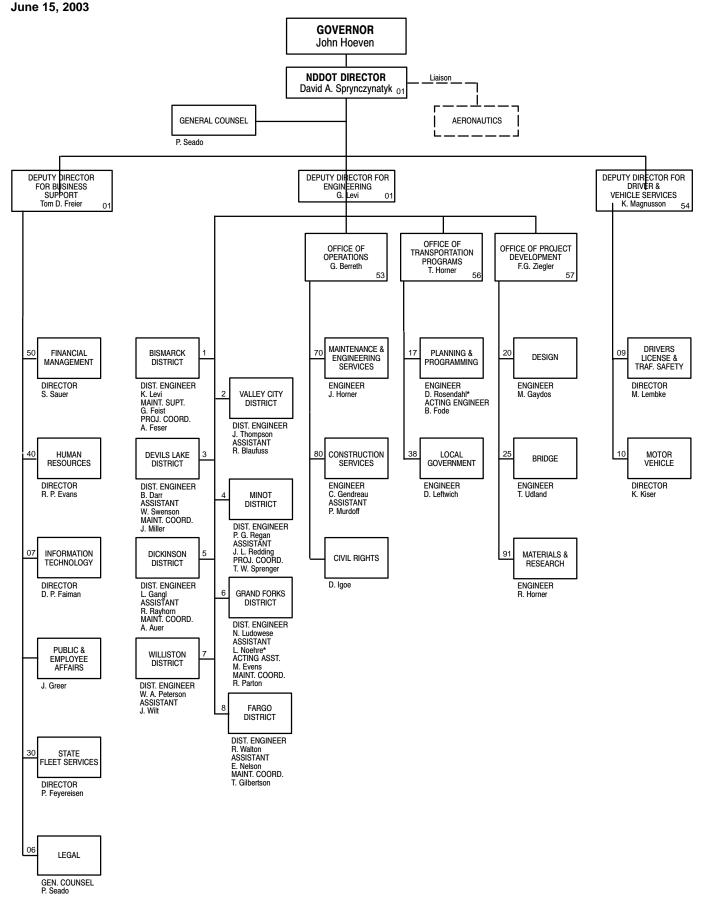
This agency could not function without its employees. The NDDOT is reviewing retention rates (excluding retirements), and results gathered from an organizational climate survey. From this valuable information, the department will re-evaluate its approach to offer the highest level of employee satisfaction possible.

### Goal 5: Strengthen stakeholder relationships.

Good relationships and open communication with department stakeholders is very important to the NDDOT. Stakeholders have a vested interest in the department. They have the ability to influence what the department does and can affect department credibility. NDDOT's goal is to consistently try to protect and strengthen those relationships.

#### NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

ORGANIZATION CHART



<sup>\*</sup> On military leave.

# **Appropriations for the Biennium Ended June 30, 2003**

Program	Appropriation	Expenditures	Unexpended Appropriation
Administration	\$29,120,482	\$21,344,699	\$7,775,783
Motor Vehicle	8,849,923	8,588,040	261,883
<b>Drivers License</b>	15,580,181	10,258,298	5,321,883
Highways	720,702,037	619,076,850	101,625,187
State Fleet	38,506,363	36,808,815	1,697,548
TOTAL	\$812,758,986	\$696,076,702	\$116,682,284

# Revenues for the Biennium Ended June 30, 2003

Description	Revenues
Taxes	\$173,843,795
Licenses, permits, registration	40,243,045
Intergovernmental revenue	475,291,323
Charges for services	694,306
Miscellaneous revenue	10,330,518
Capital Improvement Revenue from prior biennium	4,558,248
Capital Improvement Revenue carried to next biennium	(7,977,241)
TOTAL REVENUE	\$696,983,994

# Expenditures for the Biennium Ended June 30, 2003

SALARIES AND BENEFITS		
Salaries	\$ 67,789,365	
Temporary and Overtime Salaries	7,650,363	
Benefits	22,512,299	
TOTAL SALARIES AND BENEFITS		\$ 97,952,027
OPERATING EXPENSES		
Data Processing and Microfilm Service	\$ 5,061,103	
Telephone	1,029,330	
Travel	16,493,372	
Utilities	2,942,637	
Postage and P.O. Box Rental	1,423,613	
Rent of Equipment	371,615	
Lease/Purchase – Equipment	2,471,022	
Relocation Assistance Payments	444,826	
Equipment Under \$750	327,954	
Rent of Land and Building Space	205,974	
Dues and Memberships	247,656	
Professional Development and Tuition	661,028	
Advertising Services	305,806	
Freight and Express	128,119	
Other Miscellaneous Fees	1,414,852	
Repairs	7,609,563	
Professional Services	30,199,467	
Liability Insurance	1,148,934	
Office and Data Processing Supplies	509,300	
Computer Software	426,125	
Printing	876,649	
Educational and Engineering Supplies	165,702	
Paint	70,089	
Repair Parts	2,149,943	
Roadway Maintenance Materials	14,098,356	
Contract Patching	9,712,539	
Fuel and Oil	7,746,884	
Inventory Used: Motor Pool	210,858	
Expendable Tools	144,773	
License and Tags	1,012,102	
Supplies Not Classified	1,846,708	
TOTAL OPERATING EXPENSES		\$111,456,899

### **EQUIPMENT**

EQUITMENT			
Misc. Equipment over \$4,999	\$	158,640	
Computer Equipment (over \$4,999)		351,754	
Computer Equipment (under \$5,000)		1,261,480	
Equipment (\$750 – \$4,999)		1,067,059	
Major Maintenance Equipment		23,137,954	
Maintenance Equipment (over \$4,999)		1,675,802	
TOTAL EQUIPMENT			\$ 27,652,689
LAND AND CAPITAL IMPROVEMENTS			
Land Purchases	\$	1,642,066	
Right of Way Land Purchases		1,086,290	
Misc. Land and Building Improvements		1,662,426	
Storage Tanks		179,630	
Contractor Payments – Highways	4	18,965,707	
TOTAL LAND AND CAPITAL IMPROVEMENTS			\$423,536,119
GRANTS AND TRANSFERS TO OTHER STATE	\$ 35,478,968		
TOTAL EXPENDITURES			\$696,076,702

### OFFICE OF BUSINESS SUPPORT

This office includes all administrative divisions and the communications function.

The office director is Tom Freier.

### Communication

(Jane Greer, director)

### Responsibilities and activities

The communication office is generally responsible for three types of communication: with NDDOT employees, with the media, and directly with the public.

The communication staff facilitates multidirectional communication between employees, managers, and executives by publishing a weekly employee newsletter, "The Grapevine." The office also helps executives create messages to employees about critical issues for dissemination by other means, such as memos or letters or at staff meetings.

The office creates and maintains relationships with media across the state. With this type of relationship, the department is better able to communicate to the public through the media.

NDDOT communicates with the public through public meetings and public hearings; letters to the editor and newspaper columns; appearances on local TV and radio talk shows; media interviews; ads and notices in newspapers; presentations to various civic and local government groups; news releases on key issues and events of public interest; articles and topic papers; speeches; and videos. Working with department divisions and districts, the communication office plays a large part in all these activities.

### **Key accomplishments**

During the 2001–2003 biennium, the communication office formed a task force to create NDDOT's first strategic communication plan, part of the department's overall strategic plan.

The plan is comprised of ten "practices" designed to help all NDDOT employees communicate effectively with each other as well as with stakeholders and customers.

In 2003, the "511" system of comprehensive travel information went into effect. The system includes road conditions, weather, and load restrictions, organized by location and available by phoning "511." (The information is also available on the department's web site, www.discovernd.com/dot.) Before initiation of the system, callers had to choose from and remember a list of telephone numbers in each district. The communication office was responsible for all public and media information about the 511 system, including television and radio ads, brochures, billboards, and banners at large sporting events.

### **Financial Management**

(Shannon Sauer, director)

### Responsibilities and activities

The Financial Management division is responsible for the departmen's accounting and reporting functions, budgeting, payroll, procurements, audits, revenue forecasting, central supply, cash management, and the disposal of highway equipment and materials.

#### **Key accomplishments**

During the past biennium, the

Financial Management division met the required number of IFTA/IRP audits. At the same time, the division implemented the Connect ND project, which will eventually replace the division's existing accounting system with a state-of-the-art system that will be fully integrated with the rest of state government. The division is fully committed to the Connect ND's development and implementation. This has resulted in a

major commitment of staff and resources. The department will see great benefits from the successful implementation of Connect ND, because it will enable the Financial Management division to discontinue the use of several major financial systems, becoming solely integrated with statewide systems.

### **Human Resources**

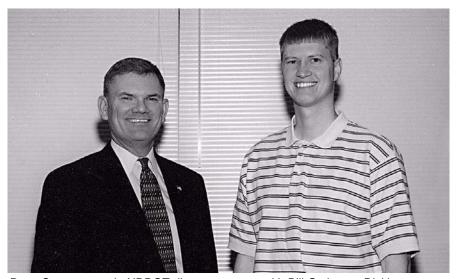
(Bob Evans, director)

The Human Resources division (HRD) is responsible for a variety of activities relative to the department's employees. HRD is responsible for recruiting and selecting employees, training, performance evaluation, and maintaining employment records. Other activities include staffing plans, salary plans, payroll, position classifications and essential functions, and personnel policies. HRD also runs the department Information Desk.

### **Key accomplishments**

NDDOT sponsored 355 training sessions and 428 non-NDDOT sponsored training/meeting/conference sessions. Registrants for these sessions totaled 6,176. HRD's payroll team filled or processed 197 classified positions and 427 temporary positions for a total of 624. Recruitment bonuses were awarded to those hired into "hard to fill" categories.

A Mentoring Opportunities program was initiated in March 2003. Twelve mentor/mentee pairs are participating in a year-long commitment. In addition, NDDOT provided ten scholarships to North Dakota college students in engineering-related fields and offered employment to these students upon



Dave Sprynczynatyk, NDDOT director, mentor, with Bill Gathman, Dickinson district, mentee

upon graduation. The department also supports student internship programs and provided 112 students with internship opportunities in various locations throughout the state.

In October 2002, the department initiated a performance bonus program to recognize significant meritorious contributions of its employees. Nomination submissions were formally evaluated for impact, dollar savings, innovativeness, and other critical factors. One-time cash awards totaling \$25,312 were awarded to 35 employees during FY 2001–2003.

The department also completed an

employee organizational health survey to determine how items like pay, benefits, and opportunities for advancement were rated. Our challenge is to develop and implement strategies for addressing NDDOT employee retention and motivation.

Finally, NDDOT is implementing the TRAC program into three junior high/high schools this coming biennium. The TRAC program is a hands-on math and science curriculum designed around realistic transportation-focused projects intended to interest students in civil engineering and transportation professions.

### **Information Technology**

(Doug Faiman, director)

### Responsibilities

The Information Technology Division (ITD) is responsible for all technology-related activities including information systems, network and pc support, telecommunications, electronic equipment, information processing, multi-media,

media, technology training, desktop publishing, web development, and e-business. ITD is also responsible for records management, photography, printing, mailing, and building maintenance and security.

In addition, staff are involved with various committees including:

COG, Heep, specific strategic business plans, Enterprise Architecture IT Department consolidation team, USPS Postal Customer Council, RAC, and CORE.

During the past biennium, the IT division made great strides in increasing staff efficiency to keep up Review Board and associated Domain Teams, EDMS, CADD,

with the ever growing workload. This has included updating equipment, new or revised software applications, technical training, increased development and maintenance of web sites.

### 2003 Legislations

Several items adopted in House Bill 1505 apply to the IT division, including the transfer of \$350,000 from the IT division budget, and the transfer of 1.5 positions from the IT division, to the Information Technology Department. Additionally, services will be consolidated with the state's Information Technology Department. Adapting and changing in accord with this legislation will prove to be a challenge for the division.

### **Major activities**

AKTS (Automated Knowledge Testing System) – The nine-year-old DOS system was replaced by a Windows 2000 client server LAN based environment. A number of functional enhancements including six foreign language tests, multiple audio stations, random test questions, report generators and ease of test updates from the administrative console.

CADD – Several engineering tools were purchased and installed to enhance our Computer Aided Drafting and Design (CADD) system. This provided NDDOT engineers with enhanced functionality, and the ability to complete projects in a more effective and timely manner which increased productivity. Vendor provided and NDDOT customized CADD training is offered each year to NDDOT employees as well as local government and consulting engineering firms.

**CARS** (Construction Automated Record System) - This provides construction system progress information on a timely basis. Benefits include compatibility with other office systems, electronic processing of estimates, elimination of multiple paper copies, and reduction of paperwork due to electronic storage. The system updates road construction information provided to the public and allows on-line viewing of reports which saves printing costs and staff time.

### **CVISN** (Commercial Vehicle Information Systems Network) –

The intent of the project is to enhance commercial motor carrier enforcement and allow for carrier on-line credentialing. The North Dakota team attended three workshops presented by the Federal Motor Carrier Administration and developed the top level design of six incorporated projects which was submitted to FMCSA.

Phase I of the Motor Carrier Rewrite Project has been completed and work has begun on the design phase. The new application will incorporate the three motor carrier applications into a single Web based application which will allow for on-line credentialing by the carriers.

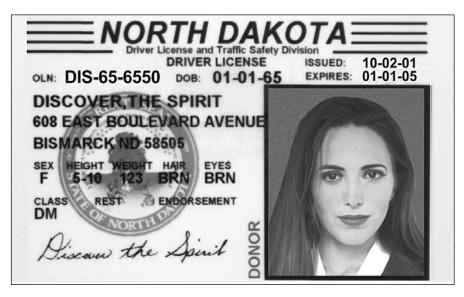
**DDLS** (**Digital Drivers License Testing System**) – Digital image access allows for the retrieval of any driver image on the DDLS server. The NDDOT successfully renegotiated a new contract with Unisys Corporation which provided for a full replacement of all hardware and a software upgrade. The printing of the cards went from three minutes to under one.

DOTSC (DOT Support Center at NDSU) – Worked with NDSU computer students in developing the following applications: Hearing Office Application, High Accident Location System, Preconstruction Central File, Bid Letting History, Manhole program, Culvert Program, Risk Management for Utility Program, and Ref.

#### **Driver and Vehicle Data Access**

A number of changes have been incorporated to allow for additional access methods to our information to authorized parties who meet the Driver Privacy Protection Act provisions.

**E-Commerce** – Web applications were developed for map sales,



motor vehicle renewals, and driving records. The division also implemented a one-way electronic construction bidding process.

EDMS (Electronic Document Management System) – This was implemented successfully in DLTS. Plans are to expand it into the rest of the NDDOT in the 2003–05 biennium. The division also acquired a new forms design package which will integrate with the EDMS software

Employee Resource Directory Employee phone and photo directory. A system to pull information from Position Management and Reporting System (PMRS) to create an employee phone listing by division, employee name and phone number, including an employee photo.

Equipment - Replaced or upgraded 40 network printers; installed 60 new printers or plotters, and replaced or upgraded approximately 200 computers or monitors. The division also upgraded or replaced hardware in 14 Motor Vehicle branch offices in support of VRTS on-line processing.

Facility Condition Assessment Assists the Maintenance and Engineering Services division in tracking district, section, and building assessment information. A hand-held computer is used for the district assessments, and the data is uploaded upon returning to office. The data is tied to GIS and photo in order to display it graphically.

511 – With Maintenance and Engineering Services Division, produced data in support of the new 511 system, which provides the public with up-to-date road condition information. The public now has one number to call for all statewide road information,

including load restriction information. 511 is a nationwide system. In addition, the division enhanced and now maintains the process for road reporting and load restriction/limits data, plus submits data directly to the vendor.

GIS (Geographical Information System) – GIS data can now be combined with CADD data, RIMS data, and Ortho photos. Using ArcIMS, the department can dynamically view Highway Performance Classification ratings, Falling Weight Deflectometer test results, and other highway information. ITD also participated in the forming of the state GIS Hub.

**Network** – Maintained 99% + network availability, and provided support to all NDDOT employees in central office, all district offices, sections, and remote locations.

Migrated/upgraded 798 workstations to the Windows 2000 professional platform. The division upgraded approximately work-stations to Novell Network client access. On approximately 100 workstations, the division installed EDMS software and changed domain and active directory accounts. This includes installation of software applications FileNet, Pinnacle, Cardiff, and ClearWater, and operating system upgrades and network upgrades. IT replaced or upgraded 40 network printers, installed 60 new printers or plotters, and replaced or upgraded approximately 200 computers or monitors. IT also upgraded or replaced hardware in 14 Motor Vehicle branch offices in support of VRTS online processing.

On-Air Bid Openings – Twenty live bid openings were broadcast over Bismarck cable TV and

streamed live to the Internet, thus allowing our contractors to view this from any place in the world that has Internet access.

**Postage** – An alternative package delivery service to UPS was identified, providing rates that are approximately 23% less. To reduce shipping costs, the address data base for contractors has been cleaned up.

**Records Management** – Disposed of 12,000 plus linear inches of records, while maintaining 25,400 linear inches of records in both paper and microfilm.

**RWIS** (Roadway Information **System**) – Installed three additional RWIS sites at Grassy Butte, Devils Lake and Wahpeton. In order to save the state money, this equipment was installed by IT and district personnel. Due to the unavailability of a land-line telephone at the Devils Lake RWIS location, a wireless solution was engineered resulting in a significant cost savings to the state. IT upgraded the RWIS file server and implemented new services, including the Buxton Bridge de-icing system, and the camera, weather station, and web pages for the tri-level bridge over I-94/I-29 interchange in Fargo.

Telecommunications/Radio – Built a new 400 foot radio tower which replaced the 300 foot tower already in the West Fargo area. This was done for safety, the future growth in West Fargo, for accommodating mobile data terminals, and improving radio coverage on the mobile data system in some of the fringe areas. NDDOT installed 40 new state-of-the-art radio repeaters, which resulted in considerably less downtime and improved performance.

Video Programs - Developed videos for five public hearings, five other major video programs from script to distribution, including two video's for the NDDOT to use at public meetings, orientation etc. IT also developed a video on seat belt use for the NDDOT, as well as videos for Job Service North Dakota, and the State Health Department. IT also developed seven testing videos for the Materials and Research Lab from script to distribution. The division produced radio and/or TV spots for four snow plow safety ads, several work zone safety ads, 511 ads, and spots for the First Lady, the Governors office, and Health Department.

Web – Forms, GIS data, manuals,

concept reports, the Grapevine, and other information are available on-line to help and inform NDDOT employees. The division built and maintains over 4.500 pages on the Web, including the TransAction manual, Executive Office biographies pages, Strategic Plan, STIP, Cultural Resources Web pages, 511 Web pages, Adopt-A-Highway, Keep North Dakota Clean posters, RV dump sites, Materials and Research pages, Crash Facts, Traffic Trends, Meth Products, equipment information, pages on recreational and historical signing, the Transportation, Scenic Byways, Memorial Bridge, and the AASHTO conference in North Dakota. IT also made the NDDOT Web site ADA compliant and helped outside contractors for nine sites funded by the NDDOT to make sure these sites meet all ADA compliant issues.

Web access for Law Enforcement – Law enforcement – Law enforcement can now access a listing by county of any driver who is currently under suspension, cancellation, or revocation. The list is updated on a daily basis at 6:30 a.m. to insure that timely information is available.

Digital image access allows for the retrieval of any driver image on the DDLS server. The application displays the date of the photo and the associated demographic information.

### **State Fleet Services**

(Paul Feyereisen, director)

## Responsibilities and activities The function of State Fleet Ser-

The function of State Fleet Services is the management, operations, maintenance, purchase and disposal of the states 2,850 licensed motor vehicles. All insurance programs are managed by State Fleet Services. The alcohol and controlled substance testing for all state agency and university system CDL drivers is our function.

### **Key accomplishments**

The rapid rise in fuel costs and motor vehicle repairs and labor was a major budget concern, but through monitoring expenditures, the division did stay within appropriations. State Fleet initiated a new trend in fleet vehicle replacement to acquire smaller vehicles as a means to reduce acquisition and operational cost,



Over 3 million gallons of fuel is pumped into state vehicles each year

while maintaining or increasing a vehicle's value at disposal. State Fleet created, disseminated, and implemented a policy and training program for large passenger (LP) vans. This is an ongoing program, with oversight responsibility resting with State Fleet. Approximately

1,900 people were trained during the biennium. State Fleet also conducted Defensive Driving Course (DDC) training for approximately 3,000 drivers of State Fleet vehicles during the biennium.

### OFFICE OF DRIVER AND VEHICLE SERVICES

This office includes Drivers License and Traffic Safety Division and Motor Vehicle Division.

The office director is Keith Magnusson.

### **Drivers License and Traffic Safety**

(Marsha Lembke, director)

### Responsibilities and activities

The Drivers License and Traffic Safety Division offices are visited by more than a quarter of the state's population each year. The division represents one-half of the NDDOT's front-counter services, where a driver's permit. license, renewal, or identification card can be obtained. Driving records or crash reports may be purchased, or applicable fees for suspension-related driving behavior may be paid. Twenty-eight of the 44 sites are fully automated for customer convenience. Law enforcement, the court system, and insurance companies rely on the quality and accessibility of conviction and crash report data gathered and maintained by the division. While a portion of the division's responsibility is regulatory, promoting safety on our state's highways is paramount. The division applies for, receives, and administers all National Highway Traffic Safety Administration (NHTSA) federal grant dollars. Based on problem identification data, an annual highway safety plan is developed, and approximately \$3 million is spent each year by local entities and state agencies in promoting traffic safety efforts. During the past biennium, the main focus was centered on child passenger safety awareness, seat belt use, motorcycle safety education, and

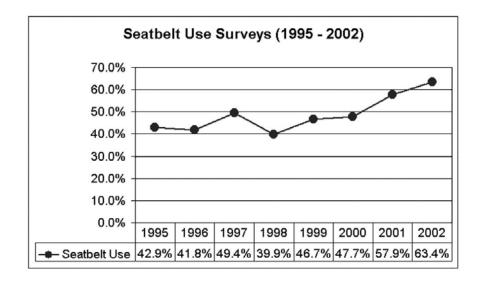
alcohol awareness activities (especially among our state's youth).

### **Key accomplishments**

Through effective state and local efforts, a statewide seat belt use survey showed a 6% increase in seat belt use, from 58% in 2001 to63% in 2002. The 2003 ND Legislature passed a law which lowers the legal blood alcohol content (BAC) while driving from 0.10% to 0.08%, which was a major achievement by the department. It is hoped that by enforcing this law, impaired driving will be deterred, saving lives and preventing injuries.

Much technological advancement has been made. The majority of the county courts and eight municipal courts are now filing traffic convictions electronically, which means the majority of state's attorneys have access to driving records. It is now possible for law enforcement to view a driver's license image or driver's license record on-line. They also have the opportunity to view the driver's license suspension data base.

In addition, the division was the first to go paperless in the department with the design, installation, and successful implementation of an electronic document management system (EDMS) pilot. With the new system, staff is able to increase their level of customer service by eliminating the need to physically leave their desks while retrieving and re-filing paper documents.



### **Motor Vehicle**

(Keith Kiser, director)

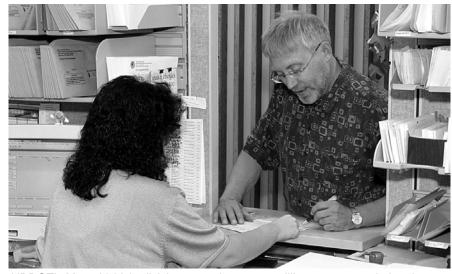
### Responsibilities and activities

The Motor Vehicle division administers all programs relating to the titling and registration of vehicles. The division regulates motor vehicle dealers, interstate motor carriers, mobility-impaired parking privileges, and intrastate household goods carriers, and is responsible for maintaining and making available records created by its various activities.

The division serves the public at a central office in Bismarck, 13 privatized branch offices located throughout the state, three county treasurer offices, by mail, by fax, by e-mail, and through the Internet. Five of the branch offices also provide partial registration services to interstate motor carriers, who no longer need to conduct the transaction in Bismarck. The department has located the branch offices within the same building as drivers license testing sites at Dickinson, Minot, Devils Lake, Grafton, Jamestown, and Valley City. The privatized operations result in decreased operational costs for the division.

### **Key accomplishments**

During the 2001–2003 biennium, the division processed more than two million customer transactions, collected and distributed more than \$275 million for various state government agencies, and responded to more than 250,000 customer inquires via telephone



NDDOT's Motor Vehicle division served over two million customers during the past binneium

calls, e-mails, letters, and fax. The division used approximately three percent of its total collections to cover operational expenses.

In October 2001, the Motor Vehicle division completed the successful opening of three additional branch office operations as required by the 2001 North Dakota Legislature. The legislature also provided for a four-year pilot program to test the feasibility of providing branch office services through the office of the County Treasurer in Bowman, Emmons, and McKenzie counties. The Legislative Council has been directed to consider a study of the efficiency and effectiveness of the pilot during the 2003–2004 interim.

In May 2002, the Motor Vehicle division completed the implementation of an on-line vehicle registration renewal system using

the Internet. More than 30,000 registrations and approximately \$1.7 million were processed through the on-line system by the end of the biennium. Public comment has been overwhelmingly positive, and MV expects usage will continue to grow as customers become aware of this new registration renewal option. The on-line system also allows vehicle owners to provide updated address information, and to check the availability of personalized license plates.

#### **Future challenges**

The only identified future challenge for the division is the potential loss of institutional knowledge through retirement of long-term employees. The division has several long-term employees, including several senior managers, who are at or near retirement age.

### OFFICE OF PROJECT DEVELOPMENT

This office includes the Bridge, Design, and Materials and Research Divisions.

The office director is Francis Ziegler.

### **Bridge**

(Terry Udland, engineer)

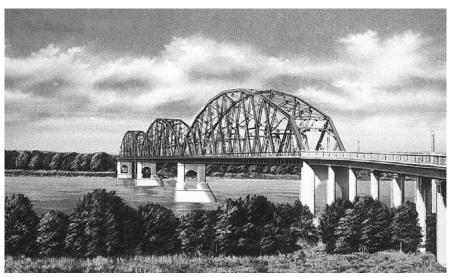
The primary responsibilities of the Bridge division are designing and preparing plans for construction and rehabilitation of state highway bridges, inspecting bridges on state and county roads, and rating bridges for load-carrying capacity. In addition, the division manages the inventory of state and county bridges and structures. Based on need, the division is continuously planning and scheduling the rehabilitation and the replacement of the state's existing bridges. The division is also responsible for the hiring of consultants to perform pre-construction and construction engineering.

#### Administrative functions

The division contributed to the completion of the contract administration for the design of the new Four Bears Bridge. This effort included working with the public, consulting engineers, state and federal agencies, local governments, and the Three Affiliated Tribes. Currently, the division is involved in co-administering the contract for the Memorial Bridge project.

### **Design and plan preparation**

The design section of Bridge division designed and prepared the plans for 13 new bridges, one deck replacement, 12 new box culverts, and eight box culvert extensions, and 105 sites of miscellaneous work (rail retrofits, approach slabs, deck overlays, bridge painting, and general maintenance).



Bismarck-Mandan's Memoriall Bridge is scheduled for replacement in 2006

New bridges include:

- Three new interchange bridges over I–94 at Kindred, Mapleton and Raymond,
- Two new interchange bridges for the intersection of I–94 and I–29 in Fargo,
- Four mainline I–29 bridges at 9<sup>th</sup> Avenue, 13<sup>th</sup> Avenue, 17<sup>th</sup> Avenue and the Texas Turn in Fargo, and
- Bridges for the Wild Rice River near Wahpeton, Turtle River near Manvel, Willow Creek near Willow City, and the Forest River near Inkster.

### Preliminary engineering and structural management

The preliminary engineering and structural management section of the division manages 4,489 state, county, and city bridges. In addition, 5,390 bridge inspection

reports were processed through cooperation with bridge inspectors from NDDOT districts.

This section also rated bridges for load-carrying capacity and issued 2,006 overload permits in cooperation with ND Highway Patrol and prepared or reviewed 28 hydraulic reports for projects including Highway 281 at Minnewauken and Highway 60 at Willow City. This section reviewed 150 bridge scour reports and wrote 18 project concept reports for projects including Highway 52 at Carrington and Highway 52 at Flaxton. Lastly, the Bridge division reviewed and approved 76 shop-drawing submittals.

#### **Consultant administration**

The Consultant Administration section (CAS) solicits consulting engineers to perform pre-construction and construction engineering for the department. In addition,

CAS interviews and negotiates with the consultants on the scope of work and contract fee.

The sections accomplishments include soliciting and processing approximately 90 contracts and supplements, managing nearly 50 projects through environmental documentation, design, and submittal of final plans, and managing approximately 70 district design projects. In addition, the section negotiated and contracted

with consultants for nearly \$16 million which resulted in sending approximately \$100 million to bid.

### **Design**

(Mark Gaydos, engineer)

### Responsibilities and activities

Design division's primary responsibilities are to develop concept reports, plans, and specifications for construction projects on the state and federal highway system, perform all aspects of right of way related work, manage billboard laws, obtain federal approval of environmental documents, ensure compliance with cultural resource impact issues, provide contract administration for archaeological, surveying, and right of way consultants, and coordinate and conduct all aerial photographs and surveys for NDDOT.

### **Key accomplishments**

### ND 1804 from Bismarck Expressway, south and east to 80<sup>th</sup> Street

This project provides for the replacement of deteriorated pavement, improvements to the roadway geometry, and improvements for additional traffic capacity. The major improvements to roadway geometry include realignments of the highway to eliminate sharp curves and the widening of narrow shoulders. The capacity improvements include additional driving lanes and turning lanes. The roadway north of the University of Mary will have an asphalt

surface with a four-lane section, two lanes in each direction plus a flush median that operates as a shared turn lane.

### US 52/281 truck bypass at Jamestown

This project provides an alternate route around the city of Jamestown and is located on the west edge of the city. The project is the result of long-term planning to improve traffic flow through the city by reducing the number of trucks traveling through the city, thereby improving intersection operations and reducing traffic conflicts at railroad crossings.

### I-29 from Rose Coulee, north to Main Avenue in Fargo

This is the first segment for the reconstruction of I-29 and associated interchanges through the city of Fargo. The project replaces deteriorated pavement and provides for additional traffic capacity through the development area of the city. The roadway consists of four-lane and six-lane sections, with auxiliary lanes to accommodate high volume traffic locations. Additionally, grade separations were added at 9th Avenue South and 17th Avenue South to facilitate internal city traffic flow and to reduce the traffic volumes on the interstate.

### I–94 from New Salem, east to Sweet Briar

This project provides for the reconstruction of 18 miles of deficient interstate pavement (nine miles eastbound and nine miles westbound). The new pavement consists of 300,000 square vards of continuous reinforced concrete pavement, and 4,062 tons of reinforcing steel. There are no formed transverse joints with this type of pavement. This project is the only continuous reinforced concrete pavement constructed in this time frame, and is part of a larger department study on concrete pavements.

### I-94 from Mapleton to Raymond – eastbound; Cleveland to Lippert – westbound; and Wheatland to Casselton – westbound

These projects provide for the reconstruction of approximately 20 miles of deficient interstate pavement. The new pavement consists of jointed and doweled concrete pavement with permeable base and edge drains. The dowels provide for load transfer at the joints to eliminate faulting and the permeable base and edge drains remove water from underneath the pavement and extend the pavement life.

### U.S. 83 (Bismarck State Street) from 6<sup>th</sup> Street, north to 43<sup>rd</sup> Avenue North

This project provided for the replacement of deteriorated pavement and improvements to the roadway to reduce traffic congestion and enhance safety. The old asphalt surface was replaced with a doweled and jointed concrete pavement. Improvements to reduce congestion included the extension of the six-lane section north of Century Avenue, the addition of several dual left turn lanes and several right turn lanes, and the reduction of service road conflicts at intersections. The project also includes a multi-use trail along the entire project, and is included in Bismarck's multiuse trail system.

## U.S. 83 (Minot Broadway) from 19<sup>th</sup> Avenue Southwest, north to 7<sup>th</sup> Avenue Southwest

This project consisted of the reconstruction of about 12 blocks of urban curb and gutter pavement. The new pavement is a doweled and jointed concrete pavement. Improvements were made to the signal systems to reduce delay and congestion, and intersections were modified to improve the turning movements. Additionally, the storm sewer and city utilities were upgraded.

### U.S. 2 in Devils Lake from ND 19, east to Goulding Road

This project consisted of the reconstruction of U.S. 2 and service roads through Devils Lake using a combination of urban curb and gutter and rural roadway sections. The old asphalt surface was replaced with a doweled and jointed concrete pavement, and the service roads were resurfaced with asphalt. Traffic capacity and operations were improved by adding turn lanes, and upgrading traffic signals. A high water table was a major concern with the reconstruction of the highway, as the roadway elevation is a lower elevation than the present lake elevation. To accommodate the high water table, an extensive storm sewer and underdrain system was designed to both construct and preserve the pavement life. The project also includes a multi-use trail which provides for pedestrian and recreational uses. The trail utilized the abandoned BNRR overpass near 8<sup>th</sup> Avenue and resulted in the removal and replacement overpass with a box underpass.

### U.S. 2 Rugby to Knox

This project provided for the reconstruction of 13 miles of the westbound lanes on U.S. 2 and two miles of urban reconstruction

through Rugby. The project consisted of widening the graded roadbed and reshaping the ditches to accommodate the roadway surfacing. Then aggregate was added onto the top of the existing asphalt surface, and the two materials were blended together to form a 20" blended aggregate base. The final surfacing included 5" of a high quality "Superpave" asphalt. Environmental impacts were minimized in Pleasant Lake area by maintaining a 54' median width.

### U.S. 52 Kenmare to Brooks Junction (U.S. 2)

This project provided for the reconstruction of approximately 39 miles of U.S. 52 including sections through the cities of Kenmare, Donnybrook, Carpio, and Foxholm. This route carries a substantial volume of truck traffic, and the improvements will provide for improved load carrying capacity and enhanced safety. The reconstruction includes grading to widen the roadway for shoulders, to flatten hills and improve sight distance, and to reshape roadway ditches.

### **Materials and Research**

(Ron Horner, engineer)

The Materials and Research division is responsible for the research program, materials testing, pavement design, and geotechnical recommendations for highway and bridge projects. The division is also responsible for the bituminous QC/QA training, the TTQP training program, and the prospecting for gravel deposits used on highway construction projects. The division is also involved with Superpave mix designs, pavement marking testing and field/plan reviews.

### **Aggregate prospecting**

Obtaining quality aggregate sources is a major function of the division. Aggregate sources are located, tested for quality, and drilled to determine overburden, depth, and quantity. This information is provided in construction plans along with test information on the aggregate sources. The division has located approximately five million tons of aggregate for construction in the past two years.

### **Materials testing**

The division has an extensive program regarding the testing of materials. The Materials and Research Lab is an American Association of State Highway Transportation Officials (AASHTO) accredited laboratory, and must pass numerous inspections and meet strict requirements to maintain the accreditation. The Materials Lab is involved with testing aggregate, soils, AC binders, traffic marking paint, concrete cement, and asphalt mixes.

#### **Administrative functions**

The Materials and Research division has the administrative task of overseeing the Quality Control/Quality Assurance (QC/QA) bituminous training classes, the Transportation Technician Qualification Program (TTQP), and research contracts with universities and consultants.

#### Pavement design

The division provides concrete and asphalt designs for NDDOT projects. Recommendations are provided for plan preparation and concept reports. Various designs are submitted for the different alternatives presented in the concept phase of projects.

#### Geotechnical

The geotechnical section of the division provides recommendations for highway projects by conducting linear soil surveys. Compaction requirements, subcuts, geofabrics, and underdrain designs are included in project reports and recommendations. Deep-foundation soils analysis are conducted for structural and landslide projects. Piling recommendations and piling depths are provided to the Bridge division or consulting firms to be included in the highway plans.

#### Research

The division is responsible for the department's research program. There are several contracts out with universities that are guiding projects relating to:

- Dowel bar retrofit mix.
- Concrete aggregate gradation.
- Fly ash percentages and performance.
- Performance and effectiveness of concrete admixtures.
- High performance bridge deck study.
- Artificially aged concrete.

The research program is conducting numerous in-house studies pertaining to the effectiveness of new products and construction procedures.



Results from core-sample testing helps the department to develop more durable pavement materials

### **OFFICE OF OPERATIONS**

This office includes the civil rights function and the Construction Services, Legal, and Maintenance and Engineering Services Divisions.

The office director is Gary Berreth.

### **Civil Rights**

(Deb Igoe, director)

NDDOT is committed to eliminating unlawful discrimination in its state, federal, and federally assisted programs on the basis of race, color, national origin, religion, sex, age, physical or mental handicap or disability, political opinion or affiliation, status with regard to marriage or public assistance, or participation in lawful activity off the employer's premises during non-working hours which is not in direct conflict with the essential businessrelated interests of the employer. In addition, NDDOT ensures that all beneficiaries and potential beneficiaries of these programs are offered an equal participation opportunity. NDDOT also protects the civil rights of its employees and applicants for employment. The Civil Rights Office has the responsibility for developing, implementing, and monitoring the following seven programs:

### Disadvantaged Business Enterprise (DBE) program

This program is responsible for certification of minority, female, and other socially and economically disadvantaged owned businesses under the rules and regulations of the federal DBE guidelines. The DBE program encourages the development and use of companies owned and controlled by minorities, women, and socially and economically disadvantaged individuals on federallyaided highway construction projects. The companies can be contractors, suppliers, or manufacturers with capabilities in the transportation industry. At the end of FY 2002, NDDOT certified 8 new businesses, for a total of 74 DBEs. With FY 2003 not complete, 13 companies have joined the DBE program, bringing the total to 85.

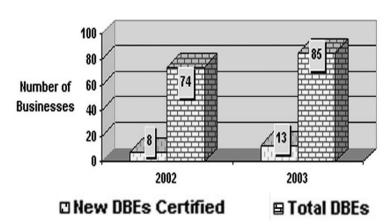
To participate in the program, the companies must be annually certified by the NDDOT. Under the DBE Program, select contracts are assigned percentage goals, based on the potential for DBE participation, type of work, location, and total dollar amount of the contract. The prime contractor must meet the assigned DBE goal or prove sufficient good faith efforts were made to meet the goal. NDDOT awarded \$12.9 million to DBE contractors in FY 2002 and \$17.7 million in FY 2003.

### **DBE/OJT supportive services**

NDDOT receives federal funding to provide technical assistance and support to companies owned and controlled by minorities, women, and socially and economically disadvantaged individuals with capabilities in the transportation industry. This technical assistance is in the area of DBE certification, bidding, bonding, bookkeeping, loans, contract procurement, etc. This allows DBE firms to enhance their capabilities, to make them competitive in the project bid process, and to increase their overall effectiveness.

In addition, state funds are used to provide counseling services to target group on-the-job trainees and to monitor their progress under the program. NDDOT contracts with a consultant to provide this assistance and these services. Currently, the supportive services

### Disadvantaged Business Enterprise Program



consultant is Laducer & Associates, Inc.

### **EEO Contract Compliance Review program**

This program ensures that federalaid highway construction projects valued at more than \$10,000 include minority and female employees on construction crews. Contractors report their achievements annually. For 2002, there were a total of 2,330 employees working in highway construction. Of these employees, there were 207 minority males, representing 8.9% of the total work force, and 212 females, representing 9.1%. For 2003, a total of 2,773 employees worked in highway construction. Of these employees, there were 242 minority males, representing 8.7% of the total work force, and 221 females. representing 8.0%.

federally-Contractors with funded highway construction contracts must also comply with the requirements of the Civil Rights Act of 1964, as amended, and the related contract special provisions regarding equal employment opportunity, disadvantaged business enterprise utilization, and on-the-job training. Formal compliance reviews document contractor efforts. If any deficiencies are found during the audit, the Civil Rights Office makes recommendations for corrective action. Under this program, the Civil Rights Office conducts in-depth audits on 10-12 contractors each year. The office conducted 11 in-depth audits in 2002 and 12 in 2003.

### EEO On-the-Job Training program

This program provides training for minority, female, and eco-

nomically disadvantaged individuals in the skilled craft classifications used by contractors on highway construction projects. Contractors are assigned trainees based on the total amount of federal-aid work they receive each season. The contractors may choose to train equipment operators, truck drivers, concrete finishers, structural carpenters, or other skilled craft workers. Training programs run from 350 hours to 500 hours. Annually, highway construction contractors must provide on-the-job training to anywhere from 25 to 40 qualified individuals. For 2002 there was a goal of 35 trainees; 30 were assigned and 17 graduated from the program. For 2003 there is a goal of 30 trainees; 34 have been assigned and, with the program not completed, 22 have graduat-

### **Labor Compliance program**

This program ensures that Davis-Bacon wage rates and fringe benefits are paid to highway construction workers on federalaid contracts valued at more than \$2,000 and subsequent subcontracts. Certified payroll monitoring and a formal complaint process document contractor compliance. All federally funded highway construction contracts are subject to the federal Davis-Bacon and related Acts. The U.S. Department of Labor has empowered the NDDOT to enforce all pertinent labor laws pertaining to Davis-Bacon wage rates, overtime, fringe benefits, payrolls, etc. Any contractor employee who feels he or she has not been properly paid may file a wage rate complaint with the NDDOT. The Civil Rights Office investigates the complaint and recovers any back wages found due.

### Title VI and Nondiscrimination program

This program ensures that all programs, activities, and services offered to the general public by the NDDOT are free from discrimination. Under Title VI of the Civil Rights Act of 1964 and its related statutes and regulations, no person or groups may, on the grounds of race, color, sex, age, national origin, and handicap or disability, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity receiving federal assistance. financial Within NDDOT, for example, Title VI might affect the site selection for a federal-aid highway construction project or the allotment of money for a subsidized busing facility for people with disabilities

### Title VII (Internal EEO) program

This program ensures that the recruitment and selection of regular and temporary employees for the NDDOT is done in a discrimination-free manner and that the work environment is free of discrimination. It also includes procedures for investigating discrimination complaints. EEO training of all NDDOT employees is part of Title VII of the Civil Rights Act of 1964. Title VII, and its related statutes and regulations, protects employees from discrimination and harassment based on race, color, religion, sex, age, national origin, and handicap or disability in all phases of employment. Title VII applies to employees and relates only to employment issues.

### **Construction Services**

(Cal Gendreau, engineer)

#### Responsibilities and activities

The Construction Services division is responsible for all highway construction bid opening activities for NDDOT construction projects including pre-qualification of contractors bidding on projects. The division reviews the constructability of project plans, establishes contract completion dates and performs field reviews of federal aid projects. Construction Services reviews and approves contractor payments, provides technical support for the Construction Automated Records System (CARS), and assists the district offices with the resolution of contract disputes and arbitrations. The division also assists the district offices in monitoring the Disadvantaged Business Enterprise (DBE) program. Construction Services is also responsible for management and supervision of the engineering pool, and coordinates statewide construction staffing. During the construction season, the division reports road construction conditions that affect the traveling public, and maintains a road construction map on the NDDOT web site.

### **Key accomplishments**

#### **Contractor payments**

The Construction Automated Records System (CARS) application was successfully rewritten in 2002–2003. This system provides an automated system to pay contractors on NDDOT projects. In the spring of 2003, Construction Services division staff tested the software, wrote training material, trained over 80 users in a classroom setting, wrote users manuals, and successfully deployed the

program to NDDOT staff, consultants and county/city engineers. The CARS application is now a Web based system, with users being able to access records from any location with Internet service. Most reports are stored on-line, reducing the need for paper copies and mailings. Few problems have been encountered and users are very pleased with the new CARS application.

### Live Bid Openings on the Internet

The NDDOT bid openings can be viewed live on Community Access television in Bismarck, or from any location on the Internet. The Internet broadcast is accessed by clicking on the link found on the NDDOT webpage. This live web cast provides real time bid information.



Over 80 hours of live bid opening coverage is provided by the department each year

### **Electronic Plan Ordering**

The Construction Services division implemented an electronic plan ordering system in 2001 allowing contractor's to order project bidding documents on the internet.

#### **Electronic Bidding**

In 2002, a free electronic bidding program was made available to bidders to assist them in bid preparation. In 2003, legislation was passed allowing the Department to develop rules and procedures for internet bidding. The goal is to have an internet bidding process in place by 2005.

### Four Bears Bridge

Construction Services was involved in the bidding process for the new Four Bears Bridge, crossing Lake Sakakawea on the Fort Berthold Reservation near New Town. The project was bid in February 2003. The project is the largest construction project in NDDOT history (\$55 million) and improves access through the New Town area replacing the narrow, functionally obsolete present structure.

### Legal

(Paul Seado, general counsel)

The Legal division provides legal services to NDDOT in all areas, with emphasis on: pre-litigation, risk management, drivers license administrative matters, contract development, negotiation, drafting, and administration assistance, review of non-construction and construction-related contract documents, legislation, and administrative rule making.

During the 2001–03 biennium, the

division held 2,550 driver's license hearings, 1,996 of which were alcohol related. Also during the 2001–03 biennium, the division directed the administration of approximately 1,719 nonconstruction contracts. The division also reviewed approximately 815 construction-related contract documents.

During the 2003–05 biennium, the Legal division is expected to

meet additional specific challenges in the areas of right of way acquisition, contracts, and risk management resulting from new laws passed by the 2003 legislative assembly. The division is also expected to meet additional challenges in an increased review of risk management policies and practices and the overall increase in NDDOT projects and responsibilities.

### **Maintenance and Engineering Services**

(Jerry Horner, engineer)

The Maintenance and Engineering Services division (MESD) is responsible for NDDOT property and facilities, safety, health and emergency responses, budgeting for maintenance operations, capital improvements, equipment, striping, specifications, special provisions, and supplemental specifications for construction projects, Tribal Employment Rights Office issues, Intelligent Transportation Systems, and load restriction and road condition reports.

### **Administrative functions**

There are a variety of administrative functions performed by the Maintenance and Engineering Services Division, including load restrictions, trucking issues, aircraft pool, equipment operators testing, and emergency response/incident management. The division coordinates the posting of spring-time load restrictions with the eight districts and notifies the media of the load restrictions. The division also provides load restriction information to truckers and posts the load restrictions on the

department's web site. When dealing with trucking issues, MESD works with the North Dakota Highway Patrol on truck size and weight enforcement issues. MESD also works with the District Engineers to address the truck-weight policy. While the responsibility for managing the aircraft pool is assigned to the Director of Business Support. MESD maintains the schedule for the department's aircraft. The division also oversees the general maintenance and hanger lease needs of the aircraft. MESD also coordinates the testing of equipment operators with the districts for the master operator program, and is also responsible for the coordination of emergency responses and incident management with Disaster Emergency Services.

### **Maintenance operations**

Maintenance operations are a core function of the division. MESD administers the budget for the purchase of major equipment, striping contracts and district

maintenance operations. The division also administers the preapproval process to evaluate new equipment, and researches the use of new maintenance materials and practices. MESD develops the equipment specifications for all non-fleet equipment and oversees equipment procurement, and provides technical assistance to districts in effective repair techniques and preventive maintenance strategies. They also provide general support services for all maintenance activities. The division publishes the Best Maintenance Practices and coordinates training activities for district maintenance personnel on stateof-the-art maintenance practices. MESD is also responsible for maintaining the department's Maintenance Manual, the management of the Maintenance Management System (MMS), and is currently working with other state agencies and an outside vendor to develop a Maintenance Decision Support System (MDSS).

### Accomplishments

The department expanded its use of liquid deicers this past biennium. Salt brine was the most widely used. Other liquids included iceban, geomelt, caliber, and potassium acetate. To handle the increased use of liquids, the department purchased storage, hauling, and application equipment statewide.

The department purchased and built approximately 60 new snow plow trucks using a turn key process. All equipment to make the truck complete is installed on the truck chassis prior to the truck leaving the installers shop. New front snow plows are purchased for each unit and are mated to the trucks at the district. The department continued with the installation of permanent mounted generator sets at three locations: Bismarck, Minot, and Grand Forks. The generators will provide for emergency power for the department to remain operational and carry out operations during power outages.

### **Safety**

Safety is paramount to NDDOT, and MESD is responsible for a variety of items regarding safety, including a review of employee accidents, employee safety program and health services, workers compensation claims, and the safety manual. When employee accidents occur, MESD is responsible for reviewing the accident. MESD is also responsible for managing the employee safety program, coordinating employee health services and overseeing workers compensation claims. Finally, the division also maintains the North Dakota Department of Transportation safety manual.



On average, NDDOT spends \$6 million per year on snow removal

### **Intelligent Transportation System (ITS) operations**

ITS technologies assist MESD in providing better information to the traveling public. The division's ITS activities include development and deployment, and roadway/weather information. MESD is responsible for coordinating the development and deployment of ITS. This includes managing federal ITS grants and projects. MESD also provides technical assistance to the districts and develops ITS equipment specifications. MESD is also responsible for collecting and disseminating roadway and weather information. This information is provided to the general public via public service announcements, call-in phone service, the Internet, and the North Dakota 511 Travel Information Service.

### **Facilities management**

The activities involved in facilities management that MESD is responsible for include capital improvements of department property, coordination of construction administration, budget, and visitor center/rest area. MESD pro-

vides assistance to the districts in the maintenance, repair, and capital improvements of NDDOT property and facilities, and is responsible for developing the specifications and request for proposals, in addition to procuring a contractor and providing construction administration for the construction of section buildings. MESD is responsible for developing and managing the budget for all major capital improvements and coordinates the replacement program for visitor centers and rest areas. This includes selection of the consultant and contract administration for the construction of each new facility.

#### **Engineering services**

MESD develops the department's Standard Specifications for Road and Bridge Construction. The division is also responsible for the development of contract provisions and special provisions required for all construction projects. The division plays the role of liaison with the Associated General Contractors (AGC), soliciting input for construction specifications and addressing

construction-related concerns. MESD is also the department's liaison with tribal governments on Tribal Employment Rights Ordinance (TERO) issues. The division develops and negotiates agreements with TERO offices for all department projects on reservations. MESD conducts technical studies and provides technical assistance to all department divisions and districts. The division is also responsible for maintaining the department's Flagging Handbook and manual on Traffic Control Requirements for NDDOT Operations on Highways and Streets.

### Maintenance decision support system

The department is active in implementing a maintenance decision support system. Several states were contacted to establish a pooled-funds program to get the project off the ground, and will continue into future bienniums. The project is based on the road reporting and 511 programs currently in place, and is intended to provide maintenance operators with up-to-date weather information, and best maintenance strategies to combat poor road conditions caused by the weather.

#### 511

The nationwide traveler information number, 511, was implemented in North Dakota on February 10, 2003. 511 has replaced all other road reporting and travel information numbers (10 differ-

ent phone numbers) that were in place prior to the implementation.

### **Living Snow Fence program**

NDDOT continued the Living Snow Fence program in this biennium. NDDOT received additional FEMA funds to continue the program. The NDDOT has partnered with the North Dakota Forest Service and Division of Emergency Management to protect the state highway system by planting living snow fences. During this past biennium, there were 58.3 miles of trees planted to protect 16.8 miles of highway.

### **Emergency response**

Due to the extreme dry conditions in the western and central parts of the state, NDDOT provided fire control support to other agencies. NDDOT committed the use of its motor graders, lowboy trailers, pickups, tanker trailers, truck tractors and personnel.

### **Challenges**

The department is moving into new areas, with advanced technology being applied to many aspects of transportation. The department purchased eight portable dynamic message signs, eight radar speed trailers, and four color video cameras. The equipment will be used to communicate with the traveling public to provide a safer traveling environment.

The department has placed pavement temperature sensors on 77 snow plow trucks. The idea was to

get a sensor in each maintenance section. The sensors are used to give the maintenance operator information about the road temperature so they can apply a higher level of snow and ice control.

The department is also in the planning stages of implementing a pilot project which involves getting a group of snow plow trucks equipped with automated vehicle location (AVL) using global positioning system (GPS). This will result in the ability to locate trucks at any given time, and to provide additional information about what the trucks are doing at that specific time.

NDDOT will continue to deploy ITS. During the reconstruction of I-29 in Fargo, various technologies are being deployed, including video surveillance cameras, video detection for signal activation, DMS (Dynamic Message Signs) and fiber optic communications links. The NDDOT continues to plan for and deploy ITS throughout the state. The ITS plan is nearing completion which will include various projects selected by the NDDOT, including additional RWIS (Road Weather Information System) sites, automated bridge anti-icing systems, statewide DMS implementation. video detection, video surveillance for security purposes, incident management, integrated road reporting and fiber optic communications.

### OFFICE OF TRANSPORTATION PROGRAMS

This office includes the Local Government and Planning and Programming Divisions and the strategic planning function.

The office director is Tim Horner.

### **Local Government**

(Dave Leftwich, director)

### Responsibilities and activities

The Local Government division administers, coordinates, and allocates funds for all county, urban and transit federal aid programs and projects. Local Government provides a liaison between the Federal Highway Administration (FHWA), county and city officials, and NDDOT divisions and districts during project development. Local Government also assists local entities in getting their projects ready for the bid openings, and coordinates the Emergency Relief (ER) program on a statewide basis for the department.

### **Key accomplishments**

Year after year, the Local Government division continues to provide a one-stop service to city and county governments, and transit projects for all their transportation related projects. During the past biennium, North Dakota counties received, through the Local Government division, \$25 million for road projects and \$9 million to repair or replace 40 bridges. Cities in North Dakota received \$48 million for street projects. Some cities and counties also received a portion of \$3 million in Transportation Enhancement funds, mostly

for the construction of multi-use paths. Transit programs are vital to the state of North Dakota. The state's population continues to decline in rural areas, yet aging and special-needs residents depend even more on transit services. Transit programs are also vital in the state's larger cities, as their populations continue to increase. Local Government's Transit section distributed \$16 million to local transit authorities and cities to help pay for new busses and vans. Without these funds, many transit programs would have to be reduced or cut.

### **Planning and Programming**

(Darcy Rosendahl, engineer)

The Planning and Programming division has many different sections, including cartography, planning, highway-rail grade crossings, rail freight assistance programs, roadway data, traffic operations, and programming.

### Cartography section

For 70 years, NDDOT has produced county general highway maps. In that time, map production has evolved from a pen-andink process drafted on linen to a digital process. With a desire to supply timely map information to highway planners and design personnel, NDDOT began the process of converting to electronic versions that duplicated the same look and feel as existing hand-produced maps.

Existing maps were digitized into Arc-Info coverage over several years. During this time, symbols and line types were built to replicate the existing maps. The setup process is complete, as is necessary symbology for the county maps. The finished electronic maps contain at least three views, with up to 20 different maps extents used per layout. The first electronic county general highway map was commercially printed in the spring of 2001. We have five counties remaining to be printed electronically before completing the first cycle. In 2004 we will begin on our second complete electronic cycle for map updates. We are currently inventorying the state on a six-year update cycle.

### **Planning section**

### TransAction – ND's Statewide Strategic Transportation Plan

The planning section led the development of the statewide strategic transportation plan, *TransAction*. The plan, covering all modes of transportation, was developed with input from all levels of government and the private sector. *TransAction* defines North Dakota's transportation vision, mission, goals, and identified 16 transportation strategies and initiatives. Action on many of the initiatives has begun and will continue into the next biennium.

### Highway Performance Classification System (HPCS)

The section completed the development of the Highway Performance Classification System (HPCS). HPCS is a blend of desired physical and performance characteristics for highways. HPCS details performance strategies and performance guidelines for five different levels of roadway. With the completion of the of second annual HPCS report, NDDOT planners and engineers are able to quantify system improvements and target capital and maintenance funds to achieve higher levels of highway performance.

### ND Transportation Handbook

The section was also responsible for updating the 2002 North Dakota Transportation Handbook. Several changes were made in addition to compiling and editing new data for the handbook. Development included a new format and design along with content additions. In cooperation with multimedia personnel, the new format was prepared and bid specifications were developed. More than 1.700 of the new handbooks have been distributed to NDDOT employees, major clients, members of the legislature, and stakeholders.

#### **Other Activities**

Lastly, the planning section participated in a number of transportation-related studies. Notably, these studies include: Northern Great Plains, "Transportation, Trade and Economic Development: Maximizing Future Opportunities in the Northern Great Plains" and the Upper Great Plains

Transportation Institute, "Biennial Freight Study." NDDOT has also joined FHWA in using the new FMIS software which monitors federal funds, and includes electronic signatures of funding approvals. The new software from FHWA combines the state and federal obligation processes, eliminating duplication of efforts. The planning section obligates every penny of available federal aid given to North Dakota, and strives to continually do so.

### **Highway-rail grade crossings**

NDDOT obligated \$2,883,111 of federal funds for 30 railroad signal projects for fiscal years 2002 and 2003. Twelve of these projects included new installation of active warning, flashing light signals with short arm gates, 12-inch LED lights and constant warning time train prediction. Existing active warning signals were upgraded at sixteen locations. The signal upgrades included flashing light signals to gates, 12-inch LED lights and present day electronics and train prediction circuitry. The active warning devices were relocated at two locations due to physical changes in the roadway. These 30 sites were on US and state highways, county major collectors, county off system and city roadways. NDDOT endeavored to reasonably distribute signal projects among the five railroads operating in the state, as well cover a wide geographical area.

### Rail freight assistance programs

NDDOT administers two rail freight assistance programs; one state funded program (Freight Railroad Improvement Program (FRIP)), and one federally funded program (Local Rail Freight Assistance (LRFA)). Both programs provide loan funds for eligible projects. In fiscal year 2002, NDDOT obligated \$1,505,205 of federal funds for one LRFA project. This project involves replacement of approximately 13.8 miles of 80 pound rail with 100 pound welded rail. This is phase II of a two part project which included replacing ties along the same segment.

### Roadway data section

### Highway information and statistics

The roadway data section responded to various requests for



Rail Freight Assistance programs are vital to farmers and manufacturers who need access to grain elevators across the state

information pertaining to functional classification systems, mileage change orders and mile point locations for construction projects and various bridges on the state highway and county system. All road system changes from the local government division were updated in the Highway Performance Monitoring System (HPMS) database. Service roads in the 13 major cities were also added as collector routes, which was a major task. These service roads work in conjunction with the major route that they parallel. Rather than merely providing access to business on the service road, they also collect traffic from the vicinity and distribute it to the crossroad intersections with the major routes. Employees in the roadway data section processed the high-accident location information for the traffic operations section. They also completed surveys and questionnaires from other states and national organizations regarding the department's roadway data files.

### Roadway Information Management System (RIMS)

The highway components database is maintained and updated with construction plans from each bid opening. This assures timely and accurate data for its users. The section provides system support for RIMS, and generated numerous reports containing RIMS data for all eight districts. Several ArcView GIS maps were produced for analysis and also to reflect the data on the state highway system.

### Highway Performance Monitoring System (HPMS)

The annual HPMS data submittal was done before the June 15th deadline. The analysis by Federal

Highway Administration (FHWA) did not find any substantial errors in our data or in NDDOT data collection procedures. Section employees (with a FHWA representative) conducted a field inventory of selected sections from the HPMS database.

### Traffic Data Collection and Processing

The section completed all traffic counts according to the traffic counting schedule. These included 48-hour volume counts between break points on state highway system and on all functionally classified streets within corporate limits. Additionally, 48-volume counts and classification counts were completed on all state routes, HPMS samples, and selected major collector routes. The section employees also completed special count requests and assisted counties and cities with equipment and guidance. Section employees also completed special studies, such as turning movements at intersections and speed surveys. The section also implemented a portable weighin-motion (WIM) program that responded to locations requested by district engineers.

#### **Traffic Data Analysis**

The section has increased the automation of the traffic data processing. All traffic data collections stations are now permanently recorded in the traffic database. Volume, classification, and weight locations each have a unique number that can be recalled and display traffic history. Volume counts have the daily, monthly, and axle factors applied automatically. The section also provided timely traffic data for the updating of the department's data files. Traffic forecasts were

made for many urban, county, and state highways. The ATR data reports were produced and distributed monthly and an annual report was produced and submitted to FHWA. Daily truck vehicle miles traveled (VMT) and linear growth rates were calculated for the state highway system. Additionally, the annual traffic report was enhanced to include more truck data and new GIS maps.

### **Traffic Operations**

The traffic operations section responded to approximately 375 various requests. The section also completed traffic operations studies for all major reconstruction projects, provided requested crash information, and reviewed and commented on design plans, project concept reports, and consultant traffic operations studies. Safety improvements were implemented through the Title II Highway Safety Improvement Program. Field work included traffic signal inspections of new installations and annual maintenance of the thirty state-maintained signals. As a result of legislation (changing the posted speed limit on most two-lane highways), a major signing project was completed. Other signing accomplishments included installation of 511 traveler information signing, and assigning a section employee to serve as the Tourist Signing Advisory Committee secretary.

#### **Programming section**

The programming section's major responsibilities are project authorization and development. This includes preparing the STIP document, monitoring project development, preparing and assembling contract proposals and

documents for all bid openings, and programming and monitoring federal aid for all state and local projects. This past biennium, the section has improved the STIP format, making it more user friendly, making it available on the Web, and expanding the public input process to include meetings with the tribal communities, cities, and counties. We present the development process as well as inform them of the upcoming projects in their juridictions. The section has also

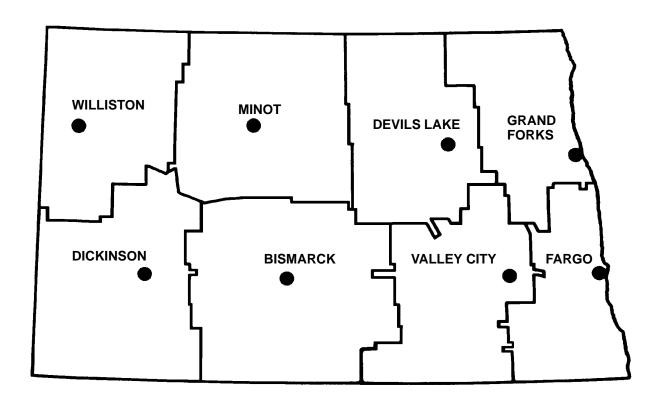
changed to a two-year STIP which is updated every year, but eliminates the possible lapse of approved projects.

### **Pavement Management**

The Pavement Management Section has continued to monitor the NDDOT highway system condition and provide data to the Department and NDSU Research Centers. The continued compiling of data has an ever increasing roll in determining pavement per formance and resulting future

budget needs. With eleven years of data available to analyze the Pavement Management Section has stepped up its roll in aiding management in project selection. The Pavement Management Section has continued to look to the future by updating its data analysis and information distribution methods which has resulted in a more user friendly data retrieval process.

# DISTRICT BIENNIAL REPORTS 2001–2003



### **DISTRICT OVERVIEW**

North Dakota's transportation system is divided among eight regional districts. The District Engineer is responsible for all the construction and maintenance activities in their designated region. District construction activities include monitoring the conditions of bridges and roadways to determine which roadways should receive the highest priority for reconstruction based on need and available funding. The district then works with the appropriate divisions in the Central Office to establish short- and long-term construction programming of the projects. Planning and design of individual projects is a joint effort with the appropriate divisions within the Department. The contract administration of the projects is then handled by the district construction staff.

Maintenance activities consist of roadway and non-roadway maintenance. Included in the roadway activities are crack sealing, blade patching, seal coats and snow and ice control activities. Nonroadway maintenance activities include the issuing of utility permits, drive permits, the Adopt-A-Highway program, the interstate haying program, the noxious weed program, the billboard program and dealing with all other right of way issues.

The districts also have a partnership with cities and counties to work together on transportation issues. Included in this process is the bridge inspection program in which district personnel inspect the bridges for these entities.

### BISMARCK DISTRICT RESPONSIBILITIES AND ACTIVITIES

The Bismarck district is located in the south central part of the state and is basically split in half by the Missouri River. Of the 2,800 lane miles, 445 are on the Interstate System and 2,355 are on the State System. The district staff consists of 99 full-time employees, which is supplemented with approximately 25 to 30 temporary employees for summertime construction and maintenance activities.

### **Key Accomplishments**

During this past biennium the district has had a very active construction/maintenance program which included the following activities.

With the department's emphasis on providing a good ride on all roadways, the interstate from New Salem to Mandan has been scheduled for reconstruction over the time period from 2002 to 2005. This segment of I–94 has the highest maintenance costs of all interstate segments in the District. This biennium two segments, the east- and west-bound roadways from New Salem to Sweet Briar have been completed. This twenty miles of interstate reconstruction cost \$17.5 million. The new roadways should provide the traveling public with a good ride and a very low maintenance roadway for the next 30 years.

In an attempt to limit construction on U.S. 83 from Bismarck north to Underwood during the Lewis and Clark Bicentennial, the district placed an asphalt overlay on approximately 80 miles of roadway. An overlay was also placed on north- and south-bound U.S. 83 from Bismarck to Wilton, and from Washburn to Underwood, at a cost of \$3.4 million. This preventive maintenance overlay should provide a very low maintenance roadway for the next 5–7 years.

Perhaps the largest urban project in the district's history was completed. The \$18 million reconstruction of State Street will provide the City of Bismarck a roadway which will serve it's needs well into the future. The old segment of roadway could no longer handle present traffic, as turning lanes were inadequate and several intersections were becoming high-accident locations. Also the roadway was rutted, making snow removal very difficult, and severe cracks were contributing to a very poor ride.

Regular preventive maintenance on all roadways is an ongoing activity for the district. These activities consist of attempting to seal coat the district roads on a seven-year cycle and to contract patch the segments of roadway which show distress from the traffic. The contract patching program program consisted of projects on several different roadways totaling \$2 million and 150 miles.

### **Future challenges**

The district will continually be challenged to provide the public with a snow and ice control program that meets their demands. As more people commute to their jobs, the Department is expected to provide extended service with it's present staff. New technology and equipment are being used to make the snow and ice control activities more efficient. Computers are being put in maintenance sections to provide sitespecific forecasts. With this information, maintenance crews can react in a timely manner to weather conditions and plan the proper snow and ice control strategies in advance. Also, anti-icing and prewetting equipment are being used to better control the amount



Concrete paving on State Street in Bismarck

and the time that chemicals are being used during a storm condition. This helps provide a safer roadway and saves the Department money on the amount of chemical used.

The Memorial Bridge reconstruction project, and the reconstruction of portions of the Bis-

marck Expressway, will provide interesting challenges for the next biennium.

### DEVILS LAKE DISTRICT RESPONSIBILITIES AND ACTIVITIES

The Devils Lake district is located in the north central part of the state, and is responsible for 1136 miles of roadway. The district consists of 75 full-time employees. A total of \$48,399,280 was invested in construction projects from July 1, 2001 to June 30, Of the \$48,399,280, 2003. \$30.350.000 in 2001 and \$3,000,000 in 2002, was used for emergency relief (ER) projects around Devils Lake due to rising lake levels. For the most part this was raising grades and then paving tem. The remainder was used on various normal construction projects including grading, hot bituminous paving and seal coats projects throughout the district.

### **Key accomplishments**

The Devils Lake district has erected two maintenance section buildings in the past two years. Langdon's building was built in 2001 by contract. Dimensions of the building are 60'×100' with five overhead doors and two walk-in type. This facility has a separate office, which is very important for new computers and a much needed better atmosphere for administrative work.

A section building was also built for the Devils Lake section at the Industrial Park in 2001. This building's dimensions are 80' ×115' with five overhead doors and



New maintenance building at Langdon

two walk-in type. This facility has an office and bathrooms to accommodate employee needs.

The district also built a 14'×20' office addition to the Rolla Section building in 2003, using Rolla maintenance employees for labor.

Several road maintenance projects were also completed during the biennium. Approximately 21% of district's roadways were sealed, approximately 25% of roadways were crack sealed, and approximately 7% of roadways had a contract patch or had a thin-lift overlay/structural overlay.

In 2001, an agreement was made with the North Dakota Highway Patrol to install a truck weight scale at the Devils Lake section site. A heated room in our cold

storage building is dedicated for their use year around.

#### **Future challenges**

The U.S. 281 corridor is in the most danger of going under if Devils Lake continues to rise. Plans are to either raise the grade of the roadway on the existing site, or relocate the roadway about six miles to the west, taking it through Brinsmade up to U.S. 2 west of Churchs Ferry. Environmental studies are being made as to what the best option will be to correct the problem.

All of the outlaying sections in the district have a need for more office space, with the exception of Langdon, which has a new building. The remainder of the outlying section buildings should either



High water on U.S. 281 (August 2003) be expanded or replaced with a larger facility. Due to the increase in size of equipment, we have outgrown the present buildings.

Another area of need is to replace the steel siding on the cold storage building at the Industrial Park in Devils Lake. This building was relocated to this location in 1991 and placed on a concrete foundation and floor. The structural steel in this facility is in good condition and would definitely justify replacement of rusting steel siding.

Roadway conditions in the district are in generally good condition. However, there are sections that have various degrees of rutting and depressed cracks. There are also roadways that are in need of structural overlay to increase the load bearing capacity. These are mainly to connect to grain terminals. The district has lost several miles of railroad over the past few years, which has resulted in an increased demand on the roadway system.

### DICKINSON DISTRICT RESPONSIBILITIES AND ACTIVITIES

The Dickinson district is responsible for maintenance on 1,978 lane miles of roadway on the interstate and state highway systems. The district has 65 full–time employees. The Maintenance division is responsible for maintaining and improving roadways, and is responsible for winter snow and ice control activities.

### **Key accomplishments**

The Dickinson District has several key accomplishments over the past biennium. The district resurfaced and reconstructed 250 miles of district roadways at a cost of \$40 million. Some of these projects included resurfacing and safety improvements on I–94 from the Montana line to Fryburg, and from Belfield to South Heart, reconstruction of U.S. 12 in Hettinger and U.S. 12

from Hettinger to the South Dakota State line, resurfacing U.S. 85 near Amidon, reconstruction and resurfacing on N.D. 22 from I–94 to Killdeer, and N.D. 22 from U.S. 12 to the South Dakota line.

District maintenance crews com-

pleted 160 miles of seal coats, revised boundaries between district sections to improve winter snow and ice control efficiency, and improved the ride on several highways by using a spray patcher to repair depressed transverse cracks in our roadways.



Asphalt paving on N.D. 21 in Hettinger County

The district also added computers to our section buildings to improve efficiency and provide maintenance operators with the latest weather forecast technology, and district employees tied for first with the fewest personal injuries and second for the fewest vehicle accidents in the department.

### **Challenges**

The Dickinson district is facing challenges in the next biennium that other districts and organizations are experiencing. There is a need to recruit new employees to fill current positions that may be opening up. Funding is also a challenge, whether its money needed to repair or reconstruct district roadways, or to replace deficient or obsolete equipment

### FARGO DISTRICT RESPONSIBILITIES AND ACTIVITIES

The Fargo district is located in the southeastern part of the state, and is responsible for 1,811 miles of roadway. The district has 88 full-time employees. The district has four sections: highway engineering, roadway maintenance, vehicle maintenance, and administration.

### **Key accomplishments**

The reconstruction of both north and southbound I-29 in Fargo from 40th Avenue South to Main Avenue was completed this biennium. Approximately \$43 million has been invested in constructing this six-lane interstate segment which included reconstructing eight interstate bridges. The I-29 reconstruction project during 2002 was one of the largest road construction projects ever completed in one construction season. The reconstruction of I-29 in 2001 and 2002 were both finished more than one month early each year. The department also hired a Public Information Consultant (PIC) to handle all media relations. public relations, and web site development and maintenance.

Another key accomplishment was the reconstruction of N.D. Highway 13 from Wahpeton to I–29. Both east and westbound

lanes were reconstructed at a cost of about \$20 million. The west-bound project was reconstructed using hot asphalt from I–29 to Richland Co. 81, and concrete pavement from Richland Co. 81 to the Wahpeton city limits. This selection of different pavement types will allow engineers to better compare the performance of asphalt versus concrete for future pavement projects.

A Traffic Operations Center (TOC) was created at the district headquarters. The traffic staff is able to monitor 17 intersections with state-operated traffic signals in the Fargo area, which includes the video detection cameras which were installed in 2002.

Key accomplishments in roadway maintenance included the crack sealing of 316 miles and chip sealing of 136 miles of asphalt highways. Several maintenance section facilities were also improved. Maintenance staff also developed several unique pieces of equipment for improving efficiency in highway maintenance.

Intelligent Transportation Systems continued to be developed. In the fall of 2002, an anti–icing bridge deck spray system was installed on the bridge over I–29 near Buxton. This system detects moisture freezing on the bridge deck, and automatically sprays a deicing chemical when needed.



Traffic Operations Center (TOC)



One of the new Elm River rest areas near Hillsboro

The I–29 Elm River rest areas near Hillsboro were reconstructed this past biennium as visitor centers. Significant improvements were made, including large general public areas, family rest rooms, tourism information displays and kiosks, modern security systems, and historical interpretation displays highlighting the state transportation system of the early 1900's.

### **Future challenges**

The largest challenge facing the Fargo district is keeping up with

the population and business growth in the southeast part of the state. With this growth, the district has seen an increase in truck traffic and loads. Reconstruction and rehabilitation of the area highways cannot keep up with this growth, so the maintenance staff is faced with more highway repair activities than in the past. The public is also requiring continuous and better snow and ice control on highways. Current staffing does not allow for 24-hour maintenance of state highways. This is a challenge the

district is attempting to overcome with improved snow plows, anticing chemical applications, and technology. With the improved snow plow capabilities comes the need to store larger equipment. The existing maintenance equipment storage facilities in Fargo are not large enough to hold seven district snow plows or two snow blowers.

The Fargo district has also seen a movement toward the development of large rail unit-car agricultural elevators. This type of facility has been built in both the Hillsboro and Enderlin communities. Another facility is under construction in Casselton. These facilities generate large truck volumes for bringing grain to the facility. In most cases, the highways serving these elevators were not designed to handle the truck volumes. With this increased weight, and the aging and deterioration of district highways, the need for Spring load restrictions increases. The result of load restrictions often means businesses and farmers must make more truck trips to move their product.

## GRAND FORKS DISTRICT RESPONSIBILITIES AND ACTIVITIES

The Grand Forks district is responsible for the construction and maintenance of approximately 940 miles of highways in the northeast corner of North Dakota. The district consists of full-time employees. The district has four sections:: highway engineering, roadway maintenance, vehicle maintenance, and administration.

### **Key Accomplishments**

During the 2001 construction season, the Grand Forks district completed the reconstruction of North Washington Street in Grand Forks. This involved new curb and gutter, concrete paving, storm sewer, lighting and incidental items. During that same year, U.S. 81 was reconstructed from Ardoch to Minto. This included widening the roadway, mining and blending the existing surface, asphalt resurfacing, and reshaping the ditches. N.D. 18 from Larimore to N.D. 15 was resurfaced with an asphalt pavement overlay.

In 2002, 11 miles of N.D. 200 from Finley East was improved by selective grading, widening, mine and blend and asphalt surfacing. This was the first of four projects scheduled for the segment from Finley to N.D. 18. U.S. 81 from Manvel to Levant had an asphalt overlay of the existing pavement, regraveling of the shoulders, widening of several box culverts, and replacement of the bridge over the Turtle River.

The U.S. 81 business loop project through Grand Forks was finished, which nearly completes the reconstruction or repair of the entire segment. The remaining segments are scheduled for completion by fall 2003.

Other significant accomplishments in construction involved contract patching in several locations totaling 17 miles, construction of 45 miles of thin-lift overlays, and 129 miles of seal coats.

District maintenance forces did crack sealing, crack repair, seal coating, patching, and wheel track repair on 660 mile of highways, but the greatest accomplishment was clearing city streets in Grand Forks after the August 2001 wind storm. Many of the streets were blocked by downed trees. The Grand Forks District, with some help from the Fargo district, responded with workers and equipment to quickly open the streets.

Another unusual event caused by nature occurred in June 2002, when a culvert beneath the median of U.S. 2 collapsed following a heavy rain storm. The result was a 30-foot deep sink hole in the median. Again, maintenance forces responded by opening the culvert before any damage to the surrounding roadway could occur. They also prepared the site so the culvert section could be replaced.

### **Challenges**

Over the next several years the district will continue to face a large challenge of maintaining the ride quality and load carrying capacity of the highway system. Even though federal funds have increased we are still not able to resurface the highways fast enough to meet the design life. The resulting older pavements will challenge our forces to maintain the quality of our system.



Storm clean-up at Grand Forks (August 2001)

### MINOT DISTRICT RESPONSIBILITIES AND ACTIVITIES

The Minot district is located in the northwestern part of the state and is responsible for the maintenance and construction of over 1,100 miles of highways. The district has 70 full-time employees. Construction and maintenance activities for the highways in the Minot district are planned, designed, and scheduled by the district, and are preformed out of the district office and eight outlying sections. Winter snow and ice control is provided for the public seven days a week and is preformed during peak travel times. Additional support services are provided to the cities, counties, utilities, USAF and public from the district, which range from everyday activities to emergency responses.

### **Key accomplishments**

New construction on U.S. 52 from the Baden Overhead to Donnybrook will make it possible to either remove or increase spring load restrictions on the roadway. U.S. 52 is part of a major commercial trucking corridor beginning at the U.S./Canadian border and extending to Charleston, SC. The grading and paving of this section took place during the 2002 and 2003 construction seasons at a cost of just under \$8.4 million.

The Donnybrook to Carpio section was also completed in 2003 at a cost of just under \$7 million.

Regrading and paving of a 49 mile segment of N.D. 5 from U.S. 83 to Dunseith helped to better facilitate commercial traffic movements, and made the roadway safer and more comfortable for motorists. The project was completed in 2003 at a cost of \$11.7 million.

budgeting limitations, the department proposed the project be completed in two seasons. The city of Minot advanced the project more than \$9 million in order to complete the construction in 2003. The department reimbursed the city in October 2003.

In 2002, the Minot district received a national Quality in Construction Award from the National Asphalt Pavement Associa-



Storm sewer lines are installed underneath South Broadway in Minot

The reconstruction of South Broadway in Minot was let in May of 2003, and construction began in June 2003. This project is unique in the way it was financed. The city of Minot wanted the project to be completed in one construction season. Due to

tion for the reconstruction and overlay of N.D. 28 from Carpio to N.D. 5. The contractor, Border States Paving Inc. of Fargo, used an automatic screed control sensor system to achieve an excellent ride, and exceeded project specifications.

### VALLEY CITY DISTRICT RESPONSIBILITIES AND ACTIVITIES

The Valley City district is responsible for the construction and maintenance of approximately 1,079 miles of highways in the south central area of North Dakota. The district consists of 74 full-time employees. The district has four sections: highway engineering, roadway maintenance, vehicle maintenance, and administration.

### **Key accomplishments**

A number of improvements were done on I-94 in the Valley City district during the 2001–2003 biennium. In 2001, westbound I-94 was reconstructed from near Exit 240 to west of Jamestown. East and westbound I-94 was reconstructed from west of Tower City to east of the Buffalo Alice interchange. Eastbound I-94 was reconstructed through the Valley City area, completing the reconstruction of I–94 through Valley City. This project, which included both roadways, received an award from the Concrete industries for quality and innovation.

Two concrete pavement repair and dowel bar retrofit projects were completed on I–94. The westbound roadway from near Cleveland to near the Streeter Interchange was completed in 2001, and the eastbound roadway from near exit 249 to Jamestown was completed in 2002. This work consists of repairing broken concrete, installing dowel bars, and grinding the pavement to provide a smooth ride.

In 2003, the district reconstructed I–94 from near Cleveland to west of Exit 248, and performed pavement repair project from near

Dawson to the Streeter Interchange. This work consisted of repairing broken concrete, installing dowel bars, and grinding the pavement to provide a smooth ride.

These interstate projects improved the ride to a good or better quality on 63 miles, or about 30%, of the total interstate mileage in the Valley City district. 77% of the total interstate mileage in the district will have a good ride after the 2003 construction season. The majority of roadways projects identified as fair or poor ride quality are scheduled for improvement in 2003-2007. When projects on the interstate are completed, the vertical clearance of underpasses will be  $16^{1/2}$ feet, providing increased height for taller loads.

U.S. 52/281 has been reconstructed into a four-lane highway from Buchanan to Jamestown. The Jamestown U.S. 52 bypass project began late in the biennium, and was completed in late fall of 2003. This is one component of the many improvements

to the U.S. 51/U.S. 281 corridor in the Valley City District. The purpose of this project is to take trucks that would normally travel on U.S. 52/281 and divert them around the city. This project is 3.6 miles long, with three bridges, and a total cost of about \$8 million.

Nearly 30 miles of N.D. 46 from U.S. 281 to N.D. 1 was resurfaced in 2002, improving the ride and retaining the load carrying capacity of this route. N.D. 46 is important to the agricultural industry in the southeast part of the state as a route to elevators and processing plants in Enderlin and Oakes.

Nearly 20 miles of N.D. 1 from N.D. 46 to I–94 was resurfaced in 2003. Three miles of this route south of I–94 were repaired to remove rough areas due to frost heaves, providing for a smoother, safer roadway in the winter and spring.

Maintenance crews were busy with seal coats, crack sealing, and bituminous patching done by district maintenance forces. This



Ribbon cutting at the U.S. 52 bypass near Jamestown

work was done to preserve the pavement or to react to defects in the pavement. Other maintenance work consists of seal coats, crack sealing, and bituminous patching done by district maintenance forces. This work was done to preserve the pavement or to

react to defects in the pavement.

With the use of improved equipment and new deicers we have decreased the response time for snow and ice on the roadways.

The district is currently working on U.S. 281 from Jamestown to

N.D. 46. In 2003 this road will be widened, followed by resurfacing in 2004. When this is completed we will have a wider, smoother pavement capable of handling heavier loads in the spring.

### WILLISTON DISTRICT RESPONSIBILITIES AND ACTIVITIES

The Williston District is responsible for over 800 miles of paved highways in the northwest corner of North Dakota. Fifty-three full-time employees are responsible for routine maintenance activities, designing and administering construction programs, and repairing equipment and administering the state fleet program.

### **Key Accomplishments**

The district continues to repair and update buildings and grounds, including the replacement of a maintenance section building in Watford City, and repairs to the district electrical supply service and outdoor lighting. Improvements were made to two rest areas, including improvements to picnic shelters and security cameras.

The district placed asphalt overlays on 105 miles of roadway, and placed seal coats on 158 miles. A contract was let for the replacement of the Four Bears Bridge near New Town for \$55 million, with construction beginning in 2003. The project should be completed by 2005.

The Be Smart program has made

the district more active in the community by going into schools and making presentations to students. This program is centered on teaching younger students about department and district activities, and giving safety instructions through the use of a coloring workbook.



Winter sets in on the Four Bears Bridge project near New Town (October 2003)

### **Available Resources**

This is a compilation of published reports, studies, and regulations. To get a copy of any of these documents, contact the NDDOT communication office at one of the following:

jgreer@state.nd.us pbraun@state.nd.us 701-328-2671 701-328-4444

### **Bridge Division**

- Structure description and inspection reports for all structures on state and county systems
- Copies of bridge plans
- Hydraulic studies
- Specific project file information

### **Civil Rights**

- NDDOT Disadvantaged Business Enterprise (DBE) Directory
- Number of minorities and females who worked on highway construction projects during July
- Data on wage rate settlements
- Contract compliance reviews
- Labor compliance reviews
- Data on Disadvantaged Business Enterprises
- Data on minority and women trainees, recruitment, and placement

### **Construction Services Division**

- Pre-qualified contractor list
- Average annual bid prices
- Construction and road condition report
- Construction manual
- Field Office Procedures manual
- Rental rates guide for construction equipment

### **Design Division**

• Roadside Management and Wet-

- lands Development Along ND Highways
- Procedures for Public and Other Agency Involvement for Highway Improvements
- Right of Way Acquisition Procedures for County/Federal-Aid Projects
- The NDDOT Relocation Assistance Program
- Highway System and Your Land
- Rights of Land Owners Under ND Eminent Domain Law
- Project concept reports
- Environmental impact statements
- Environmental assessments
- Archaeological reports
- Implementation process for the Title II Highway Safety Improvement Program
- 3R standards for 2-lane rural roadways
- 90-1 procedures manual
- I-4R design policy for Interstate
- Right of way plats
- Roadside advertising in ND
- Mailbox safety brochure and video
- Copies of plans
- Design guides
- Hydraulic studies
- Specific project file information

### **Drivers License & Traffic Safety Division**

- Annual ND Highway Safety Plan
- ND Vehicular Crash Facts
- Traffic Trends
- Life Source Donor Brochure
- Hazardous materials pamphlet
- Statistics on test results, licenses, permits, identification cards
- Driver guides for cars, motorcycles, trucks, and buses

- Drivers License site locations
- Evaluations of the safety plans
- Posters, pamphlets, and audiovisual materials on traffic safety
- Traffic Safety Executive Summary

### **Human Resources Division**

• Employment brochures

### Information Technology Division

- Special maps for sale to public
- Aerial photographs for other agencies and departments

### **Maintenance & Engineering Services Division**

- Winter road reports
- Spring load restriction postings

### Materials & Research Division

- Field Sampling and Testing Manual
- Soil survey reports
- Aggregate pit information
- Bridge foundation reports
- Pavement deflection test reports
- Pavement thickness design
- Hot bituminous pavement recommendations
- Materials testing
- Research program
- Transportation Technician Qualification program

### Planning & Programming Division

- ND Highway Statistics
- ND Traffic Report
- ND State Rail Plan
- ND State Tourist Map
- ND Rest Area Study
- Richland County Transportation Plan
- State Transit Management Plan
- Inventory of Public Transportation Services

- Standard Specifications for Road and Bridge Construction
- Highway Improvement Program and Schedules
- Statewide Transportation Improvement Program (STIP)
- ND state, county, and city traffic flow maps
- ND incorporated city atlases
- ND annual speed monitoring report
- Specific highway information
- Roadway mileage
- Current and forecasted traffic
- Pavement condition data
- Pavement ride data

- Pavement roughness data
- Pavement strength data
- Urban area boundary maps
- County truck traffic data
- County and city traffic volume data
- Reports on highway funding

### **NDDOT History**

#### 1913

First State Highway Commission formed with three members. Gov. L.B. Hanna chairman. No extra compensation.

#### 1917

To get newly available federal funds, ND abolished old commission, created new five—member body: governor as chairman, commissioners of agriculture and labor, and two members appointed by governor.

#### 1920s

By mid-1922, construction completed on more than 1,000 miles of state highway: 20 were graveled; the rest were only earth-graded.

**1925:** Legislature created state highway fund to partially match federal aid.

#### 1930s

1935: First drivers' licenses issued.

During Depression, department employed thousands with federal relief funds.

In six years in the 1930s, under six governors, seven men served as highway commissioner.

### 1940s

During World War II, shortage of

highway materials.

Many highway engineers and other employees left for armed services.

Soldiers returning from Germany cited Autobahn, with its high speeds and controlled access, as model for highway design. This led to Interstate program.

#### 1950s

Federal Aid Highway Act of 1956 created.

**1956:** First Interstate contracts in ND let for section of U.S. 10 between Valley City and Jamestown.

#### 1960s

Interstate work continued.

**1968:** Highway Building on capitol grounds completed.

#### 1970s

**1977:** ND first state in union to let contract for final stretch of Interstate (I–29 between Drayton and Pembina).

#### 1980s

With completion of Interstate, department need changed from construction to maintenance. This philosophy exists to the present day.

Walter R. Hjelle retires after a total of 25 years as Highway Department director (1961–1983 and 1986–1988), the longest tenure in department history.

#### 1990s

January 1990: ND Highway Department became Department of Transportation. Motor Vehicle Department merged into NDDOT as Motor Vehicle division.

For the first time, more state funding than just enough to match federal funds is necessary to preserve system built over 75 years. System deteriorating faster than state can maintain it.

**February 1997:** After months of working with consultant, department issues its first strategic business plan.

**January 1993–February 2000:** Director Marshall W. Moore's tenure is the second-longest in NDDOT history.

### 2001

Newly elected Gov. John Hoeven names new DOT Director David Sprynczynatyk to lead the effort to create a Statewide Strategic Transportation Plan involving all government jurisdictions, all modes of transportation, and the public.